DANISH FOREIGN OFFICE JOURNAL

NUMBER 34 1960

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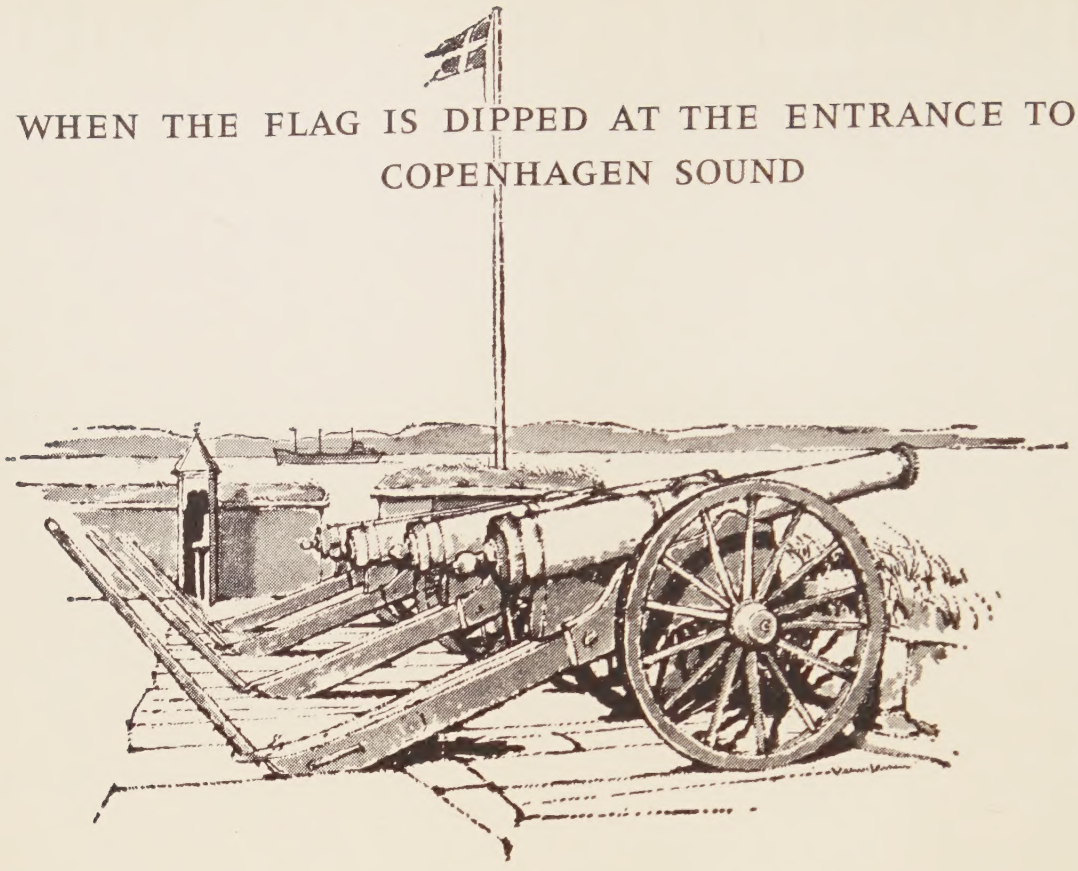
WHEN THE FLAG IS DIPPED AT THE ENTRANCE TO COPENHAGEN SOUND



When late-medieval ships stood into the narrow Sound between Denmark and Sweden, the cannons roared their warning from the Kronborg Castle bastions for the captains to drop their anchors and pay Toll on their cargoes. More than five centuries later, this heavy Toll has given way as a national source of income to exports and the roar of the guns has been succeeded by a warm-hearted tradition followed to this very day: when the flag is dipped at Kronborg it is meant as a greeting to the crews from the Commandant of Prince Hamlet's ancient castle: Godspeed and Bon Voyage!

The same respect for tradition prevails in the house of Cherry Heering. Now as then, ships stand off the Sound, many of them loaded with the famous liqueur of Denmark. Now as more than a hundred years ago, the Heering family sends its own ships overseas to serve as Ambassadors for the things which make the stately Peter F. Heering mansion in Copenhagen the centre of a far-flung organization: cherry trees in bloom in the vast Heering orchards, the old oak casks in the cellars, a business spirit deeply rooted in bygone years, and the fair name and fame of Cherry Heering. Unimpaired through good times and bad, the flavour of Cherry Heering is as strong and as sterling as it was in the days of the Sound Toll, and on every foreign shore – from San Francisco to Singapore – from Melbourne to Montevideo – the flag is dipped to loyal friends in the tradition of enjoyment: Cherry Heering – cheers!

CHERRY HEERING

PETER F. HEERING - COPENHAGEN - DENMARK

DANISH FOREIGN OFFICE JOURNAL

COMMERCIAL & GENERAL REVIEW

BACK TO A NORMAL LIFE

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A COOPERATIVE INDUSTRIAL ESTATE

In 1950 the Copenhagen branch of the National Association "Danish Enterprise" (Landsforeningen "Dansk Arbejde") began to apply the idea of cooperative industrial building in Copenhagen, three or four miles from the city centre. Now the entire industrial estate is expected to be in operation by 1961. By Ole Strøyberg, B. Sc. (Econ.) ..... *page 21*

LOGOGRAPHY: A LANGUAGE BASED ON NUMBERS

A language based on numbers has been devised by a Danish doctor. Intended as a means of international communication, it has aroused interest in a number of countries. In the following article Dr. Binen explains how Logography works. By Dr. L. Binem..... *page 24*

THE CHOICE OF COLOUR

Colours enter into our lives at most points. And no less important than the choice of colour is the choice of paint for the job - a fact well known to Danish paint and enamel manufacturers, who make paints capable of standing up to widely differing conditions and climates. By Henning Pedersen ..... *page 26*

STARRED CENTRE IN LONDON

The new Danish Centre in London's West End, combining travel offices and information services with a restaurant and food displays, has proved a great popular succes and is already starred as a place to see and eat at in American and German guide books. By Henrik V. Ringsted..... *page 29*

SAFETY AT SEA AND IN THE AIR

Several years of intensive research and cooperative effort lie behind the Danish radar system, which is exported to a number of European countries, to USA, South America, the Middle and Far East. By Knud Borch..... *page 31*

CHAIRS FOR ALL TIME

It is characteristic of the best Danish craftsmanship and applied art that its style and appeal are timeless. By Jørgen Ranten ..... *page 34*

The cover by Alex Secher shows a Danish summerlandscape and illustrates "Farm of the Future" on page 16

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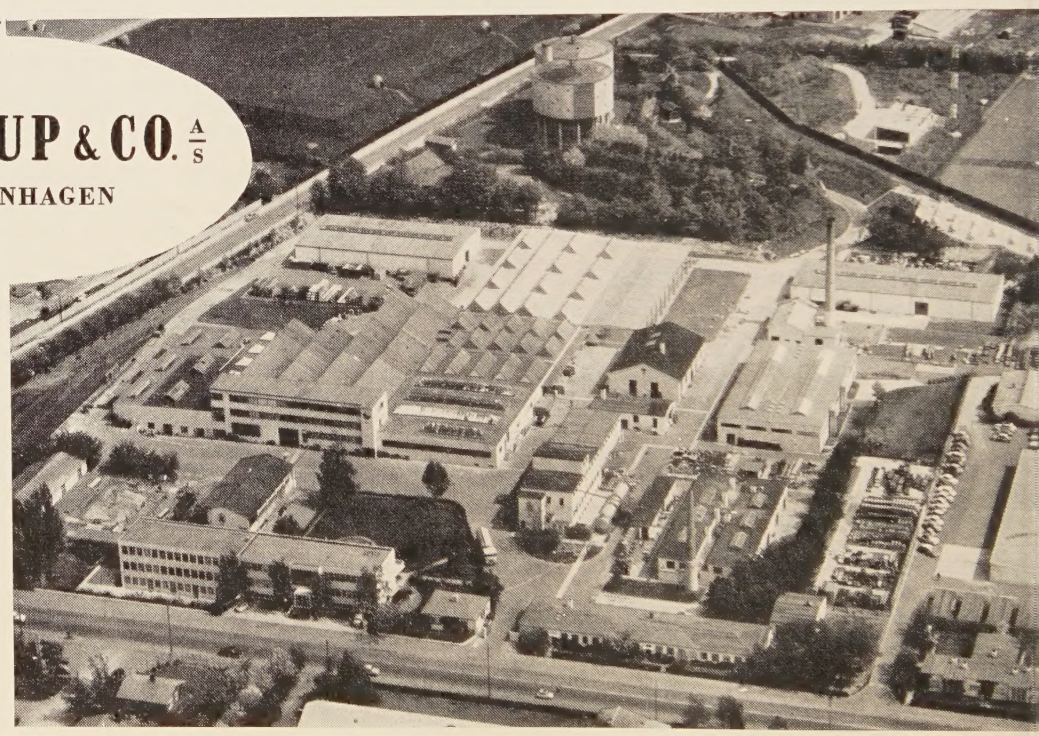

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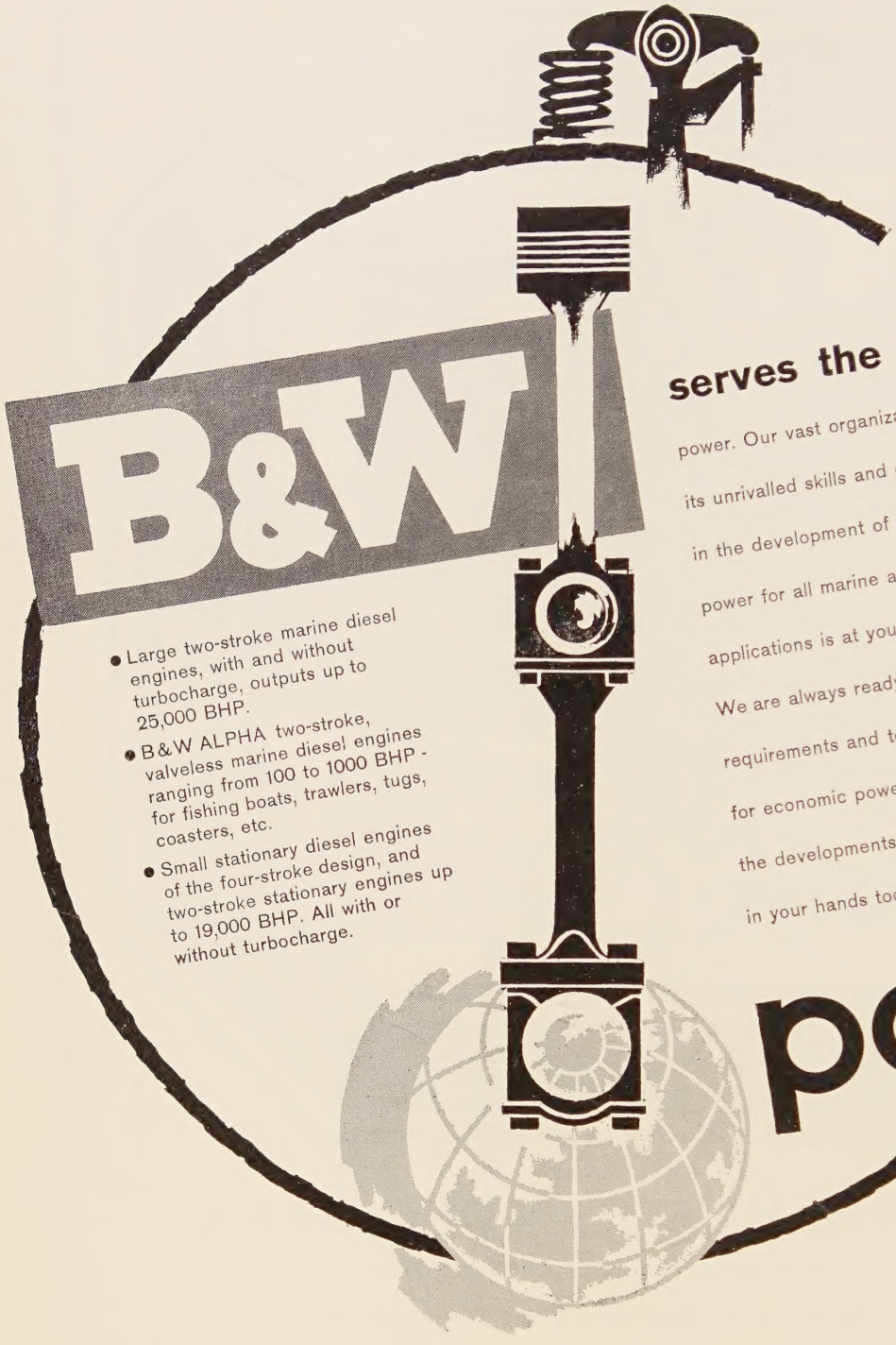

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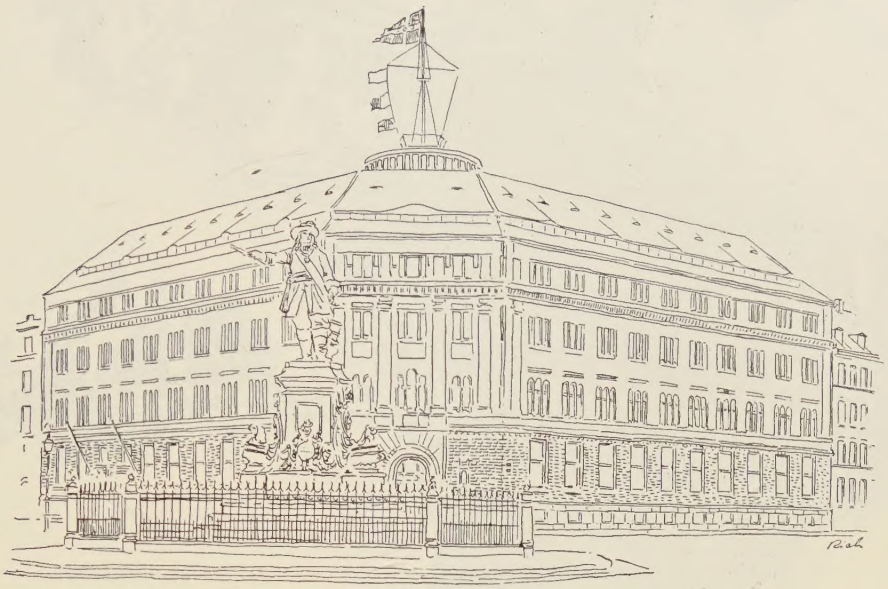

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DANISH FOREIGN OFFICE JOURNAL
NUMBER 34 . SEPTEMBER 1960

Back to a Normal Life

By Viggo Kampmann
Prime Minister, Chairman of the Disablement Service

The collective house for disabled persons in Copenhagen is a token of recent social progress in the welfare of the handicapped. The service and the patients have set themselves the task of achieving as normal a life as possible

In 1951 disabled persons in Denmark became entitled to pensioners' flats on the same terms as old-age pensioners. But there is a category of handicapped persons who cannot cope with house work and who require some form of attention, even though they are not so helpless as to need institutional care with the substantial costs to the public which that involves.

If this fairly considerable group of persons can obtain convenient flats with cooked meals, cleaning, and a measure of attention, they will be able to lead a reasonably happy and useful life.

This is the idea which inspired the erection of the collective block of flats at Hans Knudsens Plads in Copenhagen.

At the residents' restaurant there is service with a smile

30 p.c. of Tenants Disabled

The collective block contains, on its 13 floors, about 175 flats, a hostel for handicapped persons receiving vocational training, guest rooms, workshops and premises for guided activity, a shop, a restaurant, reception rooms, a *sauna*, and garages for cars and invalid vehicles.

The flats range in size from one room and kitchen recess to four rooms and kitchen recess. The layout of all flats, including kitchen and bathroom arrangements, takes into account the special

handicaps of the tenants. For example, the traditional door sills are omitted and the doors are extra-wide.

About 30 per cent of the accommodation is intended for disabled persons. So as to prevent the block of flats from acquiring the character of an institution, the rest is let to ordinary tenants, though about 20 flats are reserved for old-age pensioners.

It goes without saying that the general layout is based on experience of other collective houses at home and abroad, but particular concern for the disabled tenants has required an extension of the collective facilities.

24-Hour Porter Service

At the main entrance to the block, which is shared by all the seven flights, there is a porter's desk and telephone service. From here the staff can perform the many small jobs, such as receiving and despatching parcels, shopping, paying bills, and so on, which the handicapped tenants are unable to do for themselves.

There is a 24-hour porter service, enabling disabled tenants to call assistance at any time in case of illness or other need.

At the house restaurant, which is reserved for tenants and their guests, good plain fare is served at reasonable charges, the tenant being obliged to consume a minimum number of meals monthly. Tenants unable to visit the restaurant may have their meals served in their flats. The reception rooms are likewise reserved for tenants.

Tenants requiring it can make arrangements for cleaning help, the necessary utensils such as vacuum cleaners, polishers, and so on, being provided by the house. A special charge is made for cleaning.

The bathrooms are fitted with showers only, but in the basement there is a Finnish *sauna* which is adapted to the use of wheel-chair invalids.

Guided Activity

There is still a large number of patients, victims of the big polio epidemic in 1952, who must use a respirator. Through the agency of the Ministry for Social Affairs a special respirator department has been installed on one of the floors. The respirator patients live with their families in the general flats of the house but spend the nights, as required, in the respirator department, where there is a specially trained staff.

In the house there is also a department for guided activity, for the benefit of substantially handicapped persons who are excluded from ordinary competitive employment. This activity has two purposes: it enables these tenants to supplement their disablement pension; and it gives them something to do, together with a feeling that they are of some use.

The collective house for disabled tenants is a token of recent social progress in the welfare of the handicapped and reflects increasing public understanding of their problems. The service and the patients have set themselves the task of achieving as normal a life as possible. Wherever it can be done, the handicapped must be got out of hospitals and other institutions. This is possible by means of flats equipped to meet their needs and providing them with the requisite help. Some of these flats have been made available in the collective house at Hans Knudsens Plads; and though it was costly to build and is costly to maintain, it will prove to be socially the cheapest way in the long run.

The new block of service flats belonging to the National Association of Disabled Persons has apartments specially designed for cripples

The light-therapy room at the Finsen Institute in 1903, from the painting by P. S. Krøyer. In the group on to the left are Dr. Reyn, Vilhelm Jørgensen, Finsen's son Halldor, Professor Finsen, and G. A. Hagemann

Pioneer in Use of Light

By Dr. Børge Chr. Christensen

The Danish doctor Niels Finsen achieved international fame at the end of the last century by his scientific experiments and his discoveries in the field of light treatment. He was awarded the Nobel Prize in 1903 and died shortly afterwards at the age of 43

This year marks the centenary of the birth of Niels R. Finsen. Measured by the calendar it is only a short time since Finsen achieved his results. But progress in biology and medicine is rapid, and important obervations are quickly forgotten. In this centenary year, therefore, it is worth while looking back at Finsen and his work and describing some of the developments which have taken place since his death.

It would be difficult to exaggerate the importance of Niels R. Finsen's work in the treatment of what was until a few years ago a dreaded disease – *lupus vulgaris*. Lupus is tuberculosis of the skin and mucous membranes, and attacks chiefly the cheeks and nose. At one time it could eat away a large part of the face, turning it into a grotesque mask with one large single opening for the nose and mouth. By his efforts Finsen changed the lives of countless persons who suffered under the curse of this disfiguring disease. He brought these wretched patients literally out into the light, away from the isolation of the slums where many of them were forced to live, for with their horrible appearance they were unable to earn a normal living.

Finsen's almost miraculous treatment of a dreaded disease made a great impression on his contemporaries,

Professor Niels R. Finsen

the more so as he himself suffered from an incurable complaint which carried him off at the age of 43.

Today it is difficult to realize all that his achievements meant. Lupus is on the retreat all over the world. In Finsen's homeland, Denmark, it is practically non-existent.

Interest in the Sun

Finsen himself says, in one of the notes which he left behind him, that his interest in the sun began in 1887 or 1888 while he was still a student. Chronic sickness afflicted him even at that time. He writes: "I had an idea that it would help me if I could get more sun or get more out into the sun, and I thought that my anaemia might perhaps be due in part to the fact that my room faced north and never received any sun. So whenever it was possible and the sun was shining, I began to walk up and down St. Annæplads, which has a beautifully sunny pavement. But as a medical student I was not content merely to have the impression or sensation that sunshine was good, I wanted also to know where its benefit lay."

So Finsen turned to the medical and physiological textbooks of the day, without finding any explanation of the beneficent effect of sunlight which he felt.

But his interest was awakened, and observations that he made of small everyday things, such as that dogs and cats seek the sun and continually move to keep in the sunshine, and that "water boatmen" struggle against the stream to keep themselves out of the shadow cast by bridges, stimulated his belief in the benefits of sunlight. He explained: "These three observations, insignificant in themselves, not only convinced me of the importance of light but also of the possibility of its practical use (*i.e.*, light baths)."

Two years passed before Finsen could really concentrate on the problems which were bound up with the effect of light rays on the organism and their possible use in the treatment of the sick.

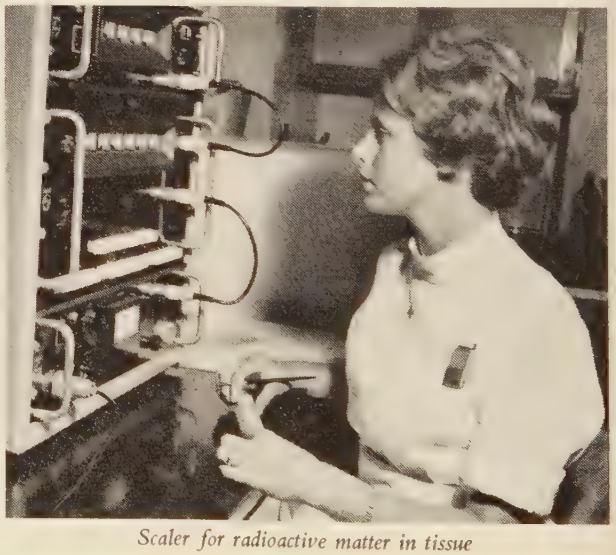
The result of his first investigations was published in 1893. This work deals with the effect of light on the skin. In it Finsen demonstrates the protective effect of skin pigmentation against the sun's rays and then mentions diseases where light has been observed to have an injurious effect, foremost amongst them smallpox. He quotes in support of this a work published in 1867 by an Englishman, C. Black, who showed that smallpox is less virulent and the pock marks much smaller when the patient is kept in darkness. Finsen concludes his treatise by pointing out that "the most rigorous treatment of smallpox by the complete exclusion of daylight can, as a result of our present knowledge of the effects of the individual light rays, be somewhat modified: a close-fitting red curtain or windows of red glass will quite certainly be equally effective."

Forces of Light and Heat

Later the same year Finsen was able to have his theory tested in two smallpox epidemics. Experience here showed that Finsen was right. In a work dated 1903 Finsen summed up his interpretation of his treatment as follows: "The modern red light treatment is a negative treatment; it consists in preventing the chemical rays of daylight from doing the patient harm, and whether this is done by letting the patient lie in complete darkness or in red light is immaterial. I have recommended red light because I think it is pleasanter than complete darkness and provides the same benefit . . . so long as the curtains are dark enough to exclude the chemical rays". Finsen preferred the expression "exclude the chemical rays of daylight", but agreed on practical grounds to use the expression "the red room".

Finsen's first light-biological work was thus concerned with the injurious effects of light.

Finsen's next work, which came out in 1895, concerned light as a stimulus. In this he aimed, as he himself ex-



Scaler for radioactive matter in tissue

pressed it, at "arousing interest in the chemical force" (linked to the violet and ultra-violet rays) and pointed out that "this force which in theory stands beside the two other forms of energy in the sun's rays, heat and light, is undoubtedly a natural force to which medicine has paid far too little regard".

In the following publication Finsen mentioned for the first time in writing the use of the chemical rays of light in the treatment of lupus. The first treatment started in November 1895 at the Copenhagen electric power station with extremely primitive apparatus. It consisted of a 20-ampere lamp and two ordinary magnifying glasses mounted in a tin cylinder. Treatment of the first patient lasted about four months and led to a marked improvement and later to recovery.

After this Finsen worked both with sun and electric light, continually improving his methods of treatment. He introduced lenses of quartz which, unlike ordinary glass, allow the violet and ultra-violet rays to pass freely. He used a special system of water cooling so that the skin did not get burned by the red and infra-red heat rays which have no effect on lupus.

Results Published

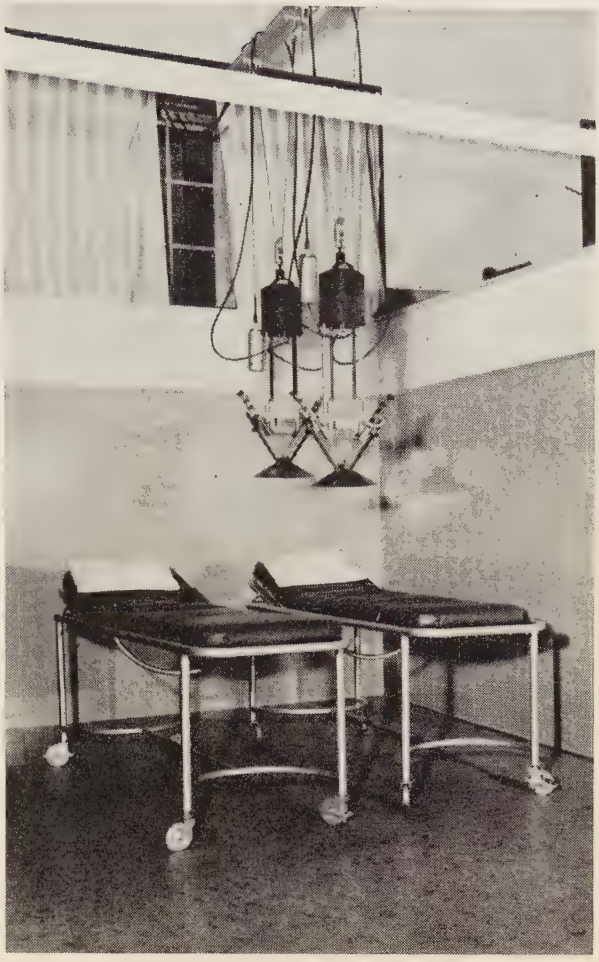
The first results of Finsen's light-treatment of lupus patients were submitted to a big congress in Paris in 1900. They were described by the world-renowned French skin specialist, Besnier, as "wonderful". Because of his own illness Finsen could not exhibit his patients himself, but his friend and collaborator Holger Forchhammer did it brilliantly for him. Through letters from Forchhammer to Finsen we get a splendid picture of how his contemporaries reacted to this new and revolutionary treatment.

Finsen himself explained the effects of light treatment in the following words: "The two qualities in light which are therapeutically important are (1) its ability to kill bacteria and (2) its ability to produce a severe inflammation in the tissues; both these qualities are connected with what are known as the chemical rays of light." Subsequent investigations have, however, shown that Finsen was not entirely correct in this, since tubercle bacilli are not killed by light treatment. The main reason for the miraculous effect must be sought in the inflammation of the skin induced by light treatment. But this detail does not alter the magnificence of Finsen's achievement in curing those suffering so sorely from lupus. Finsen was also one of the first to demonstrate the different effect of different colours or wavelengths and to show so brilliantly on the basis of innumerable experiments the effect of red heat rays and violet chemical rays. Today we have all reason to admire the results which Finsen achieved with primitive apparatus and the knowledge of physics then available.

The Finsen Institute

For his achievements Finsen was the first Dane and the third in the list of great men of science to be honoured with the Nobel Prize. This was on December 10, 1903 —a few days before his forty-third birthday. But Finsen was already a very sick man, and he was unable to make the journey to Stockholm to receive the prize. Less than a year later, on September 24, 1904, he died.

Finally, a few words about the Finsen Institute and its development: the first modest beginning was made, as already mentioned, in a laboratory at the Gothersgade electric power station in November 1895, when Finsen caused a sensation by curing a patient of lupus with "electric light".



Finsen's universal sun lamps

The Finsen Medical Light Institute proper was founded on October 23, 1896, with the following statement of aims: "The task of the Institute is to promote and advance investigation into the effects of light on living organisms, mainly with the object of using light rays in the service of medical practice." This statement of aims has since been subject to none but the smallest changes.

Today the Finsen Medical Light Institute is a fully equipped institute for research and treatment, with a well-equipped central laboratory, with departments for skin, surgical and medical diseases, plastic surgery, eye and ear diseases, out-patient departments, and clinics. The buildings bear the marks of history and of improvisation. An old seaside villa with finely decorated door panels is separated from the most up-to-date surgical department by a not particularly lovely structure devoted to light treatment. The floor space in the clinical departments and laboratories is made use of to the very last square inch. But everywhere the equipment is the best obtainable and all whose job it is to work at the institute can console themselves with the thought that fortunately it is not the size of the rooms that matters so much as the work done in them.

A summer course at a Folk High School assembles all age groups

The Family goes to School

by JENS ROSENKJÆR, M. Sc.

The Danish Folk High Schools, so well known abroad, are deeply rooted in Danish tradition. At first most of the young students came from the country, but in recent years the number of town students has been growing. In the summer whole families can now spend their holidays there

The Folk High Schools are a characteristic feature of Denmark. They have long since spread to other Scandinavian countries, where they have been adapted to local conditions. Other countries, too, have adopted them. Many educationists visit Denmark to study the schools.

The Folk High Schools were a part of the democratic movement of the nineteenth century, which demanded a free constitution and popular government. Before these could be achieved, the people had to be educated and become democratically mature. No one realized this more clearly than N. F. S. Grundtvig, the clergyman, hymn-writer and historian. Though not himself a schoolmaster, he was the creator of the Danish Folk High Schools, which he advocated in speeches and in writing. The first school was founded at Rødding, in south Jutland, in 1844. Askov, now the largest Folk High School, came later. The energetic educator who influenced the character of the numerous schools established in the following years was Christen Kold. He used to say that he had to "set the young people going so that they would never stop". Today there are about sixty of these Folk High Schools all over Denmark, and they are attended by thousands of young people. Some of them were founded by individuals, but most of them were started by groups. Some serve certain localities or are devoted to particular social, religious, or educational causes. In the course of time many branches have sprung from the old stem. Church and labour groups have built their own schools. Some schools, such as the gymnastic and nursing high schools, are partly vocational. All have one important aim in common: they gather young adults (students must be over 18) for a voluntary attendance of several months for general education and devel-

opment of personality. Vocational training is not the primary object; no examinations are held and no diplomas are given. The great majority of the students come from practical occupations and return to them when they leave the school.

Almost from the start the Government has given generous grants both to the schools and to students. The grants are liberally allocated without religious or political discrimination. The only obvious requirement is that the teaching should be of an adequate standard.

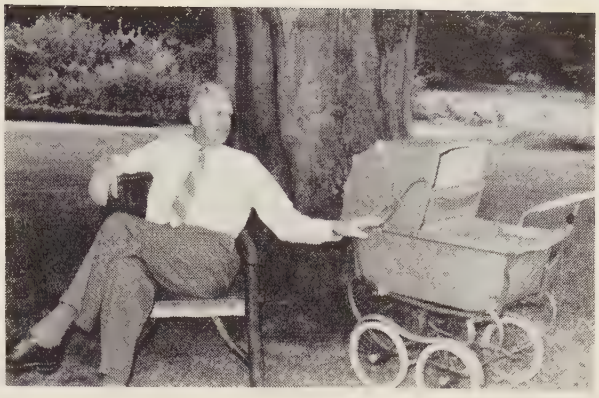
At first and for many years the majority of the pupils came from rural districts. Denmark was predominantly an agricultural country. Though non-vocational in character, the schools exerted a considerable influence on the development of Danish agriculture. They helped to create the mental and moral maturity, the feeling of fellowship, and the desire for cooperation which have characterized our farm youth. The great Cooperative Movement was one of the results.

It was some time before the schools made much appeal to city youth. Working conditions in town and country are different; it was easier for young farmers to attend a high school for a few months in the winter. In recent years the number of pupils coming from towns have been steadily growing. Young people themselves, as well as many of their employers, are beginning to realize that vocational training, necessary though it is—and there are ample facilities available—is not enough.

It has often been said in educational debates that we need not only people good at their jobs; we need *whole* people. Many young people in large towns are often lonely, missing fellowship and contact with others. The Folk High Schools have something to offer them.

The schools are residential, and they are often located in peaceful and beautiful parts of the country. They offer good comradeship and fellowship. Young people from different environments are thrown together, from the country and from towns. Because they come voluntarily and are not bound by examinations, they are particularly receptive to the material provided by the lectures, discussions, and study groups.

In many quarters there is thus a growing awareness that alongside vocational training there is a need for schools of a freer and more personal approach, schools which can give deeper meaning to life and an understanding of social problems. Efficiency in a man's daily work is necessary and valuable. Yet now, perhaps more than ever before, the need is for more than an individual performance; it is for a more active and understanding relationship with our fellow-men.



The youngest prefer to sleep during lessons

A High School Holiday

The Folk High Schools are reaching out to increasingly wider circles. Thus some years ago they started short courses, which have recently become summer schools, lasting a fortnight or a month, and are often organized in all parts of the country. In many cases Government grants are paid to the students attending these summer schools, and the attendance is growing. The students experience the healthy atmosphere of a Folk High School and are mentally stimulated. Several schools have now started special summer schools for parents with young children. The children are looked after when their parents are in school. Many of the subjects taught on these courses are of special interest to parents: child psychology, the family and the community, special problems of the young, and so on.

In this and many other fields the Folk High Schools are continuing to build on their original foundations and to adapt themselves to the many changes which our times are witnessing.

Folk High School courses are also arranged for older people: Attententive listeners to a lesson in art history

Modern Danish farm with broad farm buildings and well-appointed living quarters

The Farm of the Future

by Willy Kernel

The Danish farm we know from Hans Andersen's fairy tales, with a stork's nest on its roof, still exists. But it no longer typifies the production unit of today. The farm of the future will be an efficient family enterprise specializing in certain products: livestock and pigs, pigs and poultry, or one branch of livestock production and certain special crops

Since the great switch-over in the 1880s, from a form of production chiefly devoted to cereals to one mainly concentrating on livestock, Danish farms have been run on largely traditional lines. Mostly they are general holdings, keeping cows, pigs and poultry, and growing root, grass, cereals, and market crops.

The half-timbered Danish farm with its four sides enclosing a courtyard and with a stork's nest on the roof, which we all know from Hans Andersen's fairy tales, still exists. But it no longer typifies the agricultural production unit of today.

Until the middle of the nineteenth century, farm buildings followed a tradition developed steadily over the centuries and characterized by architecture that was in the truest sense harmonious and functionalistic. Then came a period when other accommodation, human and livestock, was necessitated by the new equipment and new methods introduced by the advance of mechanization. Many buildings were unsatisfactory in appearance and utility. Stud construction and flat roofs were unsightly. Progress had outstripped the abilities of farmers and builders.

Easier Transport

After some groping, we began to establish advisory services to guide farm construction, coordinating the skill of the agronomist and the architect with past experience in the proper designing of farm buildings. Though there may be objections to this new approach, it can be said on the whole to be the right one.

Productive equipment, which is what farm buildings

are, must above all be efficient. Fortunately, efficiency is compatible with architectural design, and the new type of broad building, often with high roofs, satisfies the requirements of good architecture.

In more recent times T-shaped farms have predominated. These usually consist of pigsty and cowshed in a straight line, with a central room which has a projecting wing containing barn, silo, farm machinery room, and so on.

This type generally serves the larger size of farm, the angle-shaped farm being satisfactory for smallholdings. Obviously there is great variation in design.

In the modern mechanized Danish farm every practical endeavour has been made to facilitate transport. Conveyors carry the straw from the permanent threshing floor to the stalls where it will be used. Elevators from grain silos and tip hoists from the beet storage room ease the day-to-day work, and the silage container is located as close to feeding places as possible. Silos are filled by means of conveyors or blowers.

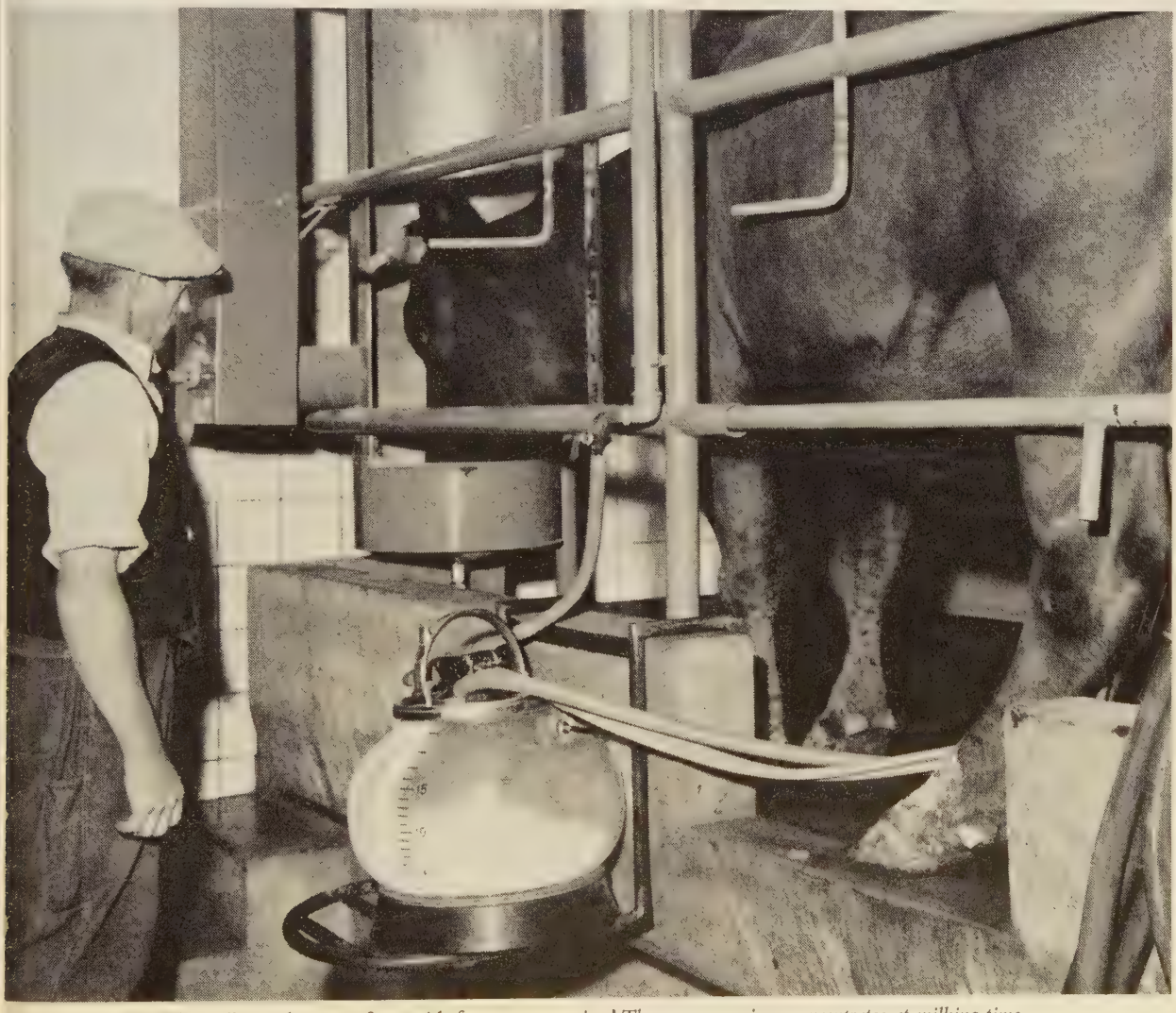
Recently the combine has come to the fore and the permanent threshing room is being replaced by grain silos; on larger farms, by grain cleaning equipment, in many places by grain dryers.

Modern Farm Building

In 1947 the Government Building Research Institute was set up. Its agricultural section has studied various aspects of modern farm construction, such as materials and interior arrangement of stalls. Modulus dimensioning is aimed at, in order that construction may be as cheap as possible and buildings made practical for working in. The foundations of standardization have been laid. The dimension of 2.4 metres is convenient for two cows, three heifers, four calves, one sow with young, or eight bacon pigs. Compartments—cow stalls, sheep pens, fattening stalls, sties for dry sows—are carefully designed.

Problems of building materials, insulation, and ventilation are no longer new to Danish farmers. Many have applied the results of the studies and have benefited financially. It should be said that the Danish climate necessitates more substantial buildings than the climate of many other countries. We have a longer winter and a bigger consumption of root crops.

We know how the livestock quarters should be laid out, and generally how buildings should be constructed. What we need to know is the demands which future trends will make on our production.



The milking place at a farm with free-range grazing. *The cows are given concentrates at milking time*

From a Danish model pig farm. The feed truck from which the fodder is weighed ensures that the pigs get exactly what they need

Cattle the Pivot

The most important productive unit in Danish farming is the dairy cow. In July 1959 the total herd of cows was about 3,370,000, slightly more than at the previous peak twenty years ago. But there were 200,000 *fewer* dairy cows and well over 300,000 calves and heifers *more* than there were twenty years ago.

Though production in recent years has swung over in favour of meat, we must be cautious about predicting considerable changes in the numbers of cattle. A dairy-farming country must have the raw materials for dairying.

But because of a declining manpower, the operating structure of individual farms is changing. Where twenty years ago there were two paid helpers for each holding of over 10 hectares, there are now many larger holdings than there are paid hands. It follows that it is difficult to get cows tended. Men cannot be found.

In the circumstances there are two courses open: to reduce the herds or introduce new methods of management. Whether the new methods will consist in cooperative or joint cowsheds, it is too early to say. But in any case cowsheds will get bigger. The joint cowshed is a practical proposition in several places. It will also enable the agricultural worker to get something like a normal working day and week, an amenity which he greatly needs.

Owing to high building costs it will not mean a reduction in labour costs per production unit. But it will help to improve quality; a possibility of which Danish farmers who succeed primarily by the quality of their produc are well aware. The joint cowshed is the burning questio in practical farming today. The other alternative, reducin the herd, is not so easy to practise. If farms which hav difficulty in getting their cows tended, chiefly holdings o from 10 to 30 hectares, were to dispose of their herds, th number of Danish cattle would be halved. As a resul 600,000 hectares could be sown with cereals to replac imported feeding stuffs for pig production, etc.; th remainder if sown with other cash crops would triple th present area so utilized. The increased production woul not at present be marketable.

The Large Cowshed

Cattle must continue to be the pivot, and the truth of th is demonstrated by the fact that with more and mo farms dispensing with cows, the herds that remain a getting larger and larger.

The solution for the smaller holding may be the co operative or joint cowshed; in other words, the larg cowshed. The free-range cowshed is not unknown t Danish farmers. They have considered it, but few hav adopted it. Though more may be forced to do so, it ha little appeal to them, at least in its known form. Ou fodder production is too varied, compared with that o say, the United States or New Zealand.

The market plans—The Six and The Seven—hav

emphasized the problem of farm economics; the manpower problem becomes more acute, and the trend must be in the direction of a more simplified operating pattern —one not highly specialized. It should be no less intensive than the present pattern, but it should enable the farmer to specialize in one, or preferably two or three branches of production which he can learn to master fully.

Given the financial backing to survive possible losses in the initial years, complete specialization would be preferable, but not all Danish farmers have this backing. They get no subsidies or grants, and so have to safeguard themselves by means of several products.

Mechanization

The farm of the future will have conveniently broad buildings, dimensioned according to modules so that the interior can be replanned as required: for pigs, cows, or poultry.

With regard to mechanization, whereas in the United States and elsewhere mechanical cowshed-cleaning plant, etc., has now been in use for a number of years, such plant has generally proved too costly for the ordinary Danish farm. This is another reason for larger herds, which would help to pay for the installations. Much work is being done to find labour-saving equipment and methods, and examples have been demonstrated at agricultural shows (Herning, 1959, and Bellahøj, 1960) and indeed have been put into practice. For example, an automatic feeder holding 1,500 kilos of beet and running on rails in the feeding passage can supply the required quantity of beet to each cow.

Whether this is the real way to labour-saving remains to be seen; but, as in other industries, methods of eliminating labour and raising production are being sought. It is only through a bigger output of quality goods that the Danish farmer will be able to compete.

Housing the Family

It has long been said that the farmer's wife is the hardest-working person in Denmark. There is something in this. Shortage of female labour has become so acute that six out of every ten future farmers' wives must come from the towns or from other occupations.

In family farms, which are steadily increasing in size and are approaching 25 to 30 hectares, the housewife must often give a hand in the field and with the livestock. On smallholdings she has often been the permanent milkmaid.

For generations the Danish farmstead has been a long building intended for a large number of people, including several housemaids, and having facilities for domestic production of the consumer goods of the past. Time has done away with this domestic industry, but the farmstead has remained generally unchanged: a beautiful building, integrated into the farm, surrounded by a garden complete with a flagstaff often in use. But who has the time to look after a big house and a big flower garden?

Poultry keeping is also an important branch of Danish agriculture

A cowshed at a progeny testing station with a group of Red Danish dairy cows. A few years ago the heifers set a new world record of 311 kilograms (688 lb.) of butter in 304 days

In recent years numerous changes have been introduced for the benefit of the housewife. Rooms have been modernized for everyday use. The National Council for Home Economics gives guidance on suitable appliances, efficient methods of work, and the use of the right materials. The refrigerator and deep-freezer have become popular. Though they have not yet got to the extent of using an electric oven to convert a deep-frozen package into a hot dinner in the space of a few minutes, the trend is obviously towards easier housekeeping.

Literature is being published on the future family home on the small farm. The studies suggest that it will be a modern bungalow, built of materials which will provide architectural harmony with the farm buildings. There will be all the space required by the family but no more; that is to say, there will be a combined kitchen-and-dining-room, a living-room, a bedroom, and two small bedrooms, one for sleeping two persons.

There will be a modern scullery, a shower bath, space for a washing machine and for working clothes, and a place where the housewife can wash vegetables. The chief aim will be a house easy to work in and to keep clean, built of the right materials.

The future farm will be an efficient family enterprise, with the farmer specializing in a few products: livestock and pigs, pigs and poultry, or one branch of livestock production and certain special crops. The buildings will be of standard design and the scope and nature of the operations will determine their length and interior arrangements.

Building Finance

Funds for building or modernizing existing buildings must be made available. In prosperous years Danish farmers built a great deal, in bad times less. Since the war they have had two major investment projects: mechanization and building construction. Mechanization has had to be given priority, but farmers are aware that building construction must now keep pace if production is to pay. Without Government subsidies there has not been much money for building.

Denmark has a highly developed system of first- and second-mortgage societies—similar to the German system except that in Denmark borrowers are members of the lending society. It has not been possible to meet the demand for loans; but recently the commercial and savings banks have established an investment corporation which may ease the financial difficulties to some extent. There is a great need of capital, however, and some reluctance is being shown in the granting of loans.

A Cooperative Industrial Estate

by Ole Strøyberg, B. Sc. (Econ.)

In 1950 the Copenhagen branch of the National Association "Danish Enterprise" (Landsforeningen "Dansk Arbejde") began to apply the idea of cooperative industrial building. A site was chosen in one of the major industrial districts of Copenhagen, three or four miles from the city centre. Now the entire industrial estate is expected to be in operation by 1961

For more than fifty years the National Association "Danish Enterprise" has been active in various fields in furthering the cause of Danish manufactures of all kinds. The Association was founded in 1908 when Danish industry was in its infancy. Its aim was to stimulate the interest of the Danish public in Danish industrial goods.

At that time Denmark was predominantly an agricultural country. Since then the picture has completely changed and today industry is as important as agriculture. By educating the public to buy Danish goods whenever they competed in price and quality with imported goods, the Association contributed to the development which has taken place. Its hundred or so local branches with their 30,000 members are still energetically pursuing this policy, which is more important than ever, now that Denmark has joined the Free Trade Area.

But the Association has not been content to help Danish industry merely by publicity and persuasion; it has been actively concerned in a number of projects aimed at increasing the efficiency of Danish industrial production. For reasons of space we shall confine ourselves to a description of one: the way in which the Association has enabled small manufacturers to acquire their own factories and premises and thus improve working conditions.

Unsatisfactory Premises

Unsatisfactory premises are often the lot of small factories and workshops in most countries. An enterprise usually starts in a small way. Then as it grows the problem of better accommodation at reasonable cost arises. This particularly applies in larger towns where operations frequently start in some basement, old factory, or former dwelling. All too often the enterprise concerned can increase production easily enough, but finds difficulty in securing the considerable amount of capital required for building its own factory.

Towards the end of the last decade the prevalence of this state of affairs in Copenhagen prompted the local branch of the Association to consider the possibility of industrial building on a cooperative basis. Buildings put up under this system would meet individual requirements, but the provision of certain communal facilities—central heating, canteens, and locker rooms, for example—would make it possible for concerns with

A general view of the industrial estate on the outskirts of Copenhagen. The estate is run on a cooperative basis

Lithography is not one thing — but many

only a comparatively small amount of spare capital to participate. Plans for suitable buildings were prepared by Ole Vinter and in 1950 it was possible to start realizing them. The site chosen lay in one of the major industrial districts of Copenhagen, between three and four miles from the city centre. The first stage of construction consisted of three factory blocks which were divided into a number of workshop units of varying size and accommodation. Some units comprised no more than workshop premises, others included store rooms and basements, while still others contained offices and lavatories on the same floor as the workshop or on a mezzanine floor above.

Altogether the three blocks provided accommodation for some twenty concerns with an average floor space of approximately 1,075 sq. ft. each. After they had been functioning satisfactorily for some time work was begun on the next block.

1,200 Apprentices a Year

Inaugurated in 1956, this provided accommodation for twelve concerns in premises somewhat larger on the average than those in the first section. Since then another section containing three large factory units has been completed and plans for the final stage of the project are in hand. Unlike the other sections, which were of one storey only, this will be a three-storey structure.

By about 1961 the whole of the Valby Industrial Estate should be in operation, providing a total factory area of some 183,000 sq. ft. at a cost of 13 million kroner. Between thirty and forty concerns employing between four and five hundred workers will then be in production and there will also be a technical training college capable of giving four three-month courses a year to some 1,200 engineering apprentices.

There is a canteen with room for 400 for the joint use of the workshops, and two large boiler plants supply the heating for all the establishments.

Finance

One of the things that gave initial impetus to the Valby Industrial Estate was the finance available. This was pro-

One of the blocks houses a printing works

Modern Danish furniture under production

vided by Government loans from Marshall Aid Counterpart Funds. Copenhagen Municipality sold the site on favourable terms against a mortgage on the buildings. Loans were also obtained in the normal way from mortgage societies, while the contractors allowed 10 per cent of the cost to remain unpaid as an additional charge on the property. Some 15 per cent of the capital was provided by subscriptions from each individual concern in the enterprise, amounting to 55 kr. per sq. metre of floor space occupied. On joining the cooperative the concern pays 5 kr. per square metre of floor space it will occupy, another 10 kr. on the incorporation of the society and further instalments when building starts, when the roof is on, and finally when the premises are ready for occupation.

The personal liability af the members of the various cooperatives is limited to the amount of their paid-up shares. On completion of the building an agreement fixing the rent according to the area occupied is drawn up between the cooperative and the member. The annual rent is worked out to include an appropriate proportion of the running costs connected with the communal services provided: mortgage commitments, taxes, insurance, administration, and audit costs. Running costs also include sums to cover external maintenance and unforeseen expenditure.

Efficient Production

The idea of devoting loans from Marshall Aid Counterpart Funds to factory building has recently been extended to legislation for countering unemployment. Under the Act the Government can lend up to 90 per cent of the cost of factory buildings, and a number of projects are in hand both in the capital and in the provinces. At the moment 2—3 million kroner annually is available for such loans and the National Association "Danish Enterprise" is participating in the construction of a number of new factories at Ballerup, Næstved, Viborg, and other provincial towns.

To promote the building of other industrial estates similar to that at Valby, the National Association has helped to form a company known as Danish Factory Buildings (Danske Værkstedhuse). The company will construct, or contribute by means of advice and finance to the construction of, factory buildings mainly on a cooperative basis and will manage the properties when they are in operation. The idea is that the company should collaborate with the local branches of the National Association in making use of the facilities provided by the new Act for erecting modern industrial buildings all over Denmark. As old buildings are condemned and demolished many skilled workers and workshops find themselves without a home. It is therefore in line with the Association's efforts to support such enterprises that it should take the initiative in constructing the new type of factory building exemplified in the Valby Industrial Estate.

Experience at Valby has shown that when concerns are housed in suitable premises they can organize their production rationally and get increased output from the men and machines they employ. These industrial estates have been called the forcing houses of the small concern. The Valby Industrial Estate is an example of the aptness of the definition.

During the 10 years it has been in existence nearly all the concerns in it have prospered and many of them have doubled and redoubled their annual turnover.

Logography: a Language Based on Numbers

By Dr. L. Binem

A language based on numbers has been devised by a Danish doctor. Intended as a means of international communication, it has aroused interest in a number of countries. In the following article Dr. Binem explains how Logography works

The more successful the struggle against illiteracy becomes, the more millions of people there will be who are anxious to get to know the world better and keen to make contact with people in other lands.

The Pen Friend Institute and many other international correspondence clubs have an ever-increasing membership. If only the nations could agree to make one of the international artificial languages, Esperanto for example, an obligatory subject in schools throughout the world, there would be a revolutionary opening of cultural possibilities to the majority of mankind. Until this happens, any means which can contribute to friendly and personal contact between people must be employed. And that is where Logography comes in. Even in the most culturally advanced countries only a minority of the population can correspond in one of the world's main languages. Most people—most ordinary people—know only their mother tongue.

Of Help to All

The principles I had in mind in devising Logography were as follows: It should be of help to everyone and require knowledge of no language but one's own. There should be nothing to learn and nothing to remember. It should be so easily understood, and so simple, that schoolchildren could use it, once they could read. It should be in dictionary form, so that each word and number could be looked up. It should be manageable so that only the barest necessities need be included at the start, and yet should be capable of expansion so that new words could be added as required (there are numbers without end). It

Dr. Binem has devoted himself to his hobby in a thoroughly systematic fashion. He has actually taken up printing and spends his spare time at the type cases setting up lists of words and numbers, as well as numbers and words

should eliminate all grammatical difficulties and reduce the amount of grammar to practically nothing.

The Dane Nørgaard has shown that the 100 most common words in a language provide half the text in an average letter, newspaper, and book. Thus with the right 100 words you are halfway there.

Thorndike and his collaborators in America, who have counted millions of words in all kinds of writings, have arranged 20,000 words alphabetically and indicated how frequently each word is used. Basic English manages with about 2,000 of the commonest words. I decided therefore to start with 2,000 words based on Thorndike's scientific research.

As for grammar, if you are writing about a house it is immaterial whether it is *der*, *die* or *das Haus*. English manages without such genders. Similarly with the many cases and inflexions of some languages—other languages do not have them, so they find no place in Logography. And so on. It is important, however, to know if an event has happened in the past or will happen in the future, if one or more things are intended, and if there is any question of possession. These are essential for proper understanding. And so Logography must have signs for them. They are expressed by a single digit after the main number. Experience has shown that they are seldom needed.

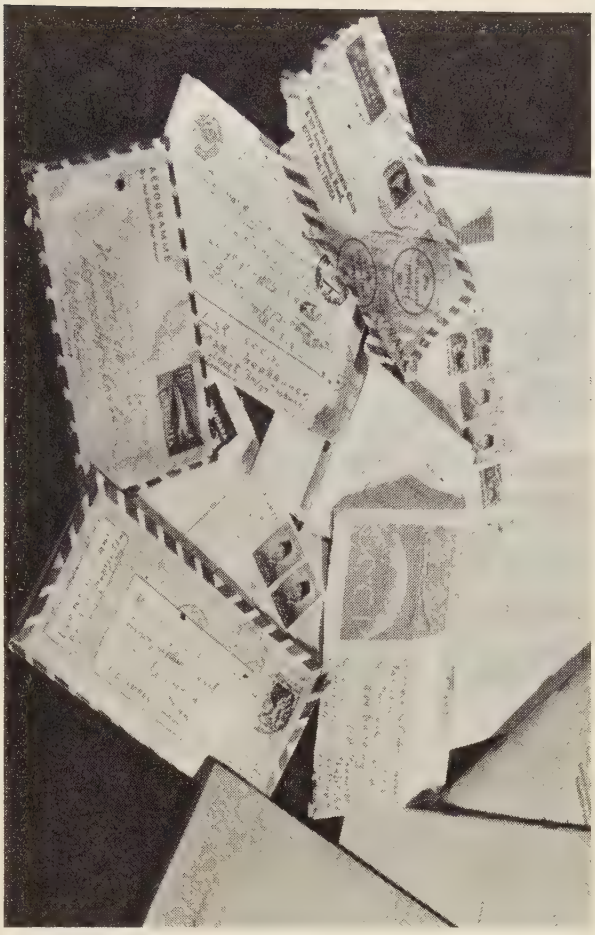
Each World its Number

Logography is based on numbers from one upwards. The fundamental words and ideas are the same the world over because people are fundamentally the same. "Hunger", "happiness", "to love" or "hate", "sun", "before", or "after" are the same for all. But different peoples describe them in different words. Logography disposes of this Babel by giving each word a certain number, which represents the same word in any language.

A person writing to a friend whose language he does not know puts his letter into Logography numbers. The recipient looks up his Logography list of numbers and this gives him their meaning in his own language.

Word-number lists must therefore be compiled for each separate language. So far these have been compiled in English, French, and Spanish. A Russian list will soon be ready.

Difficulties can arise in reducing words in different languages to a common denominator when they have a number of synonyms or, to put it another way, have several meanings; for these are seldom the same in different languages. Only one meaning need be chosen, and clearly defined, for it to be given a number in Logography. The English word "doctor" can in fact mean several things, including "to adulterate"; but this particular meaning can be omitted without much loss. There is a story about an electronic translating machine which was fed the following sentence to translate: "The spirit is willing but the flesh is weak". When the translation came out of the machine it read "The vodka is ready but the meat is spoilt". This example and dreadful warning need frighten no-one, for the more one examines the problems the less one finds there is to worry about. There are any number of words with many meanings in all languages, but we use them in writing and speech without being misunderstood. The context indicates the meaning intended.



Dr. Binem receives mail from all over the world

Uses of Telegraphese

Naturally 2,000 words are only a primitive tool of expression, and the result becomes a sort of telegraphese. But telegraphese has its uses. Hamlet's famous monologue, "To be or not to be. That is the question" expresses deep philosophical thoughts in the most everyday words.

Logography creates the possibility of personal contact which would not otherwise exist.

The framework has now been prepared and a start has been made. Further progress, which depends on word-number lists in as many languages as possible, should now come from teamwork in individual countries, by people who know their own language well and also know English, which forms the basis of Logography. Every new edition of Logography in a language spoken by millions will open the door to contacts for fresh millions of people.

The Chinese, who speak such diverse tongues that people from different regions cannot understand each other, have a common written language which all Chinese can understand once they have learnt to write it. But Logography is easier to write and understand. "Nothing to learn, nothing to remember—all you do is consult a small dictionary."

As time goes on there should be Logography teams in as many countries as possible. To start off with there is only one centre and that is at Koppel in Denmark.

The Choice of Colour

by HENNING PEDERSEN

Colours enter into our lives at most points. And no less important than the choice of colour is the choice of paint for the job – a fact well known to Danish paint and enamel manufacturers, who make paints capable of standing up to widely differing conditions and climates

We spend our lives surrounded by colour. The right colours can give a feeling of well-being and good humour at work and gladden the eye when we relax at home – whether we see them on the walls, in our furniture, in our films and slides, or on television. True, Europe is still waiting for this last, but it will come in time.

As a Danish artist has put it: colour bears on our lives at most points – in nature, in art, in industrial goods, in our homes, in our clothes. It is of the greatest importance to our morale during our daily round. And once our eyes have been opened to all that colour can mean, life becomes even richer. So it is important that its potentialities should be exploited to the utmost.

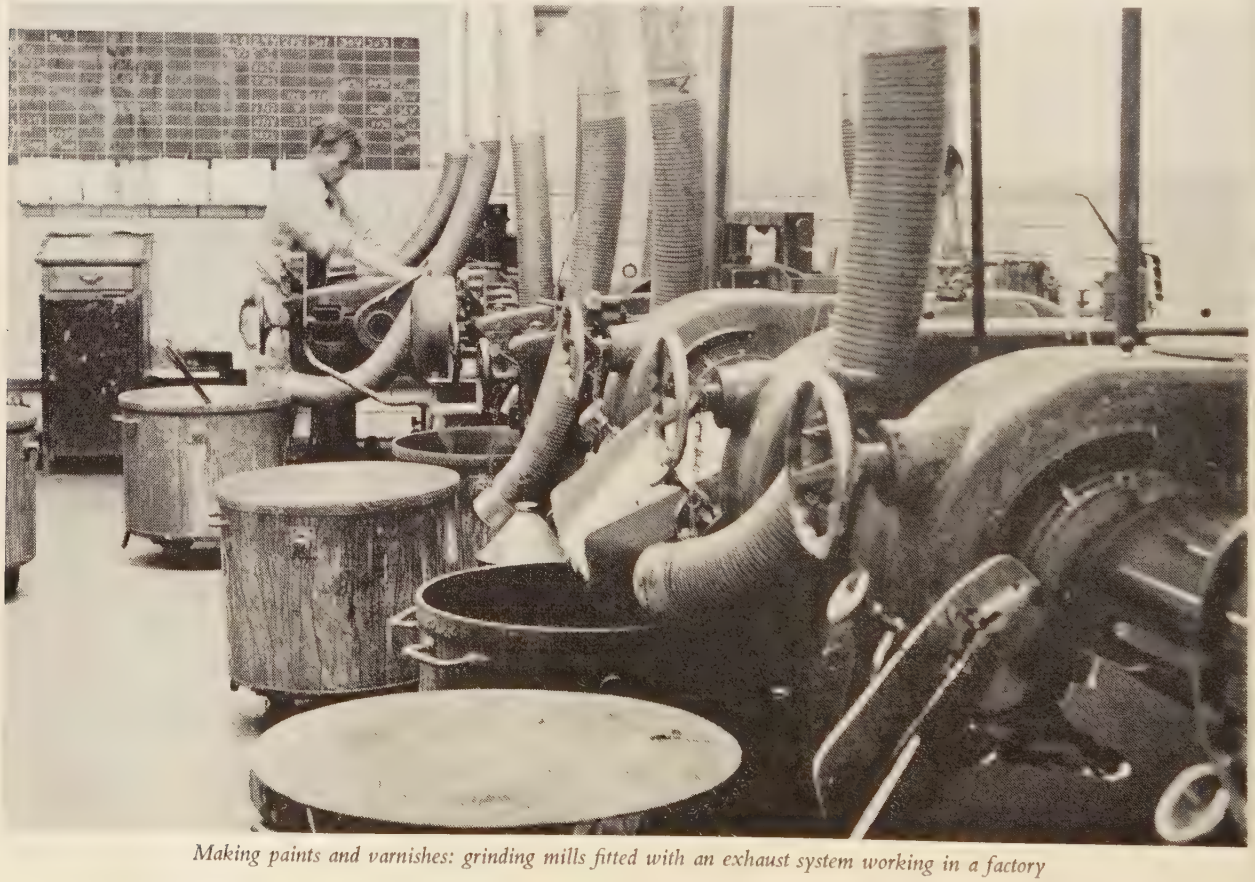
These potentialities are not exhausted by merely making colours, and the paints that provide colours of exactly the rights shade. Both colours and paints must be suited to special purposes: brick houses, wooden houses, concrete houses, steel bridges, ocean liners (which never stop being painted), tractors, toys, and so on. Wood, concrete, and steel products occur in endless variations. And every variation demands its own group of colours and paints if colour effect and economy are to be coordinated.

All over the World

The sun, or the absence of sun, plays an important role. Wind, rain, and sleet cause wear. Nature conspires with the by-products of modern heating methods – smoke, soot, sulphurous fumes, and other impurities from both solid fuel and oil-fired apparatus – to attack all treated surfaces.

From a climatic point of view Denmark is well fitted to produce paints and enamels capable of standing up to conditions anywhere in the world. As a result, between one-sixth and one-seventh of the annual production in terms of value is exported. In recent years, Danish manufacturers have set up sales offices in distant parts of the world.

The secret of this success for a small country's industry lies in the maintenance of the high standard of quality essential for export. The paint and enamel industry employs a greater number of civil engineers than any other branch of the chemical industry. The volume of research they have carried out has



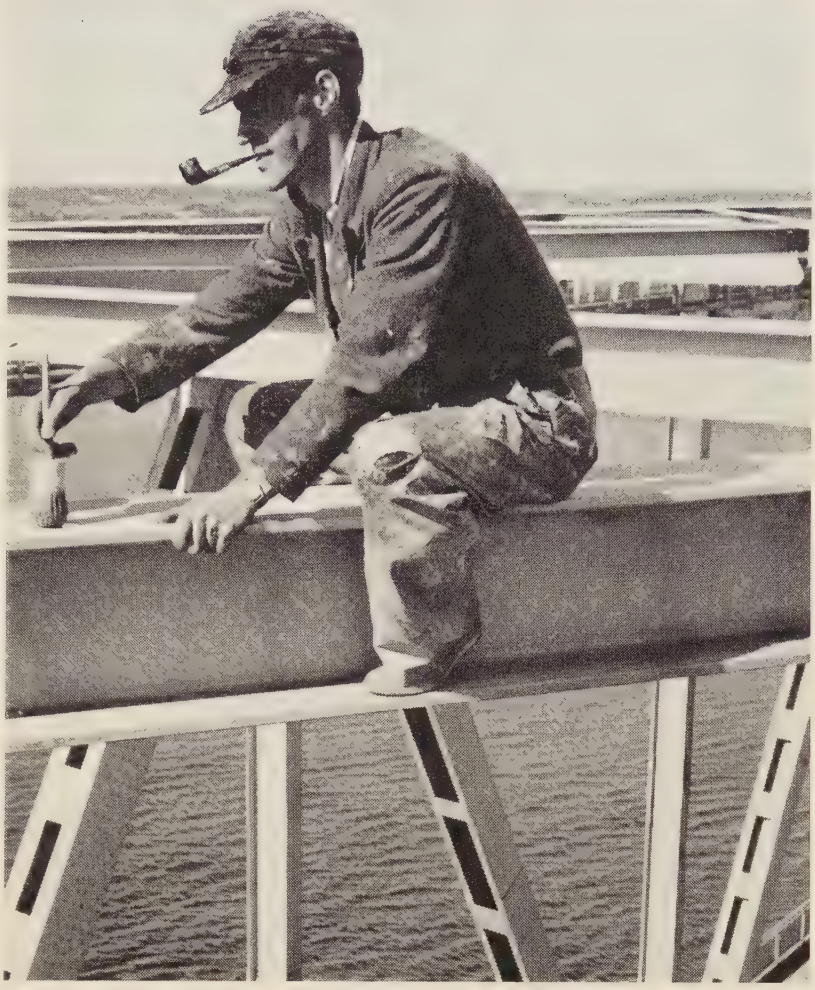
Making paints and varnishes: grinding mills fitted with an exhaust system working in a factory

made the industry perhaps better equipped than industries in the new countries where we must compete.

The staff structure of the Danish paint and enamel industry is typical of a modern industry where automation has been applied: 53 per cent of the employees belong to the management, technical, and sales staff.

Only a few years ago the Danish paint and enamel industry made 10,000 different lines in 100 different groups – a state of affairs dating from the time when each factory aimed at manufacturing every line. The market was protected and manufacturers wanted to ensure that despite restrictions the public would be able to obtain the industry's products in every conceivable variety.

That outlook no longer exists. Nowadays the aim is to produce only the number that can rationally be produced and to modernize the manufacture and sale of them. To this end certain manufacturers concentrate on certain products. For example, Denmark has a large merchant fleet, and shipping companies use hundreds of tons of paint annually in keeping their vessels in first-class condition, for which the factories special paints. Others concentrate on making colours for the printing industry, where demand is increasing rapidly.



Painter busy at work on the Little Belt Bridge which connects the island of Funen with Jutland

Appropriate Composition

When Danish manufacturers sell such things as refrigerators, dairy machinery, and radio equipment to the tropics, or build bridges in backward countries, they team up with paint manufacturers to ensure that paints of suitable chemical composition are available to protect their products against corrosion. Indeed corrosion is one of the world's big economic headaches, especially in the under-developed countries with their extremes of climate and great humidity. In a country like Denmark hundreds of thousands of pounds annually are spent in this battle. In a backward country such sums mean even more to the march of progress which it is so important to get started and carried on. This perhaps is one reason for the success Danish manufacturers have had in some seventy foreign markets.

Structural Rationalization

To meet the increased competition to which the formation of larger markets gives rise, there has been not only a move to rationalize manufacture on a national basis but close cooperation between separate manufacturers in various countries, especially the Scandinavian countries. In addition, Danish manufacturers have formed subsidiaries in other European countries and in Africa. This distribution of markets over a wide area, coupled with a regrouping of the categories of products, achieves what has come to be known as structural rationalization – a sharing out of work so that factories apportion special tasks between them. This means more economic production for the manufacturer, while bringing benefit to the consumer. Rationalization also means more time and money for research so that new products can be developed in the factory's own laboratories in step with industrial developments in other fields and with the demands made by new materials for new kinds of protective surfaces.

Hotels in Egypt no less than aeroplanes that fly all over the world have to be painted with fireproof enamels and paints. Danish tractors, exported to many countries, are treated with a special Danish enamel. The USA is foremost among a number of countries interested in Danish speed boats – resplendent of course in Danish paint. The steel that goes into bridges, oil tanks, radio masts, and ships provides special problems which the Danish paint and enamel industry has succeeded in solving. Danish furniture is increasingly in demand abroad – partly because the right paints have been evolved to meet public taste in the different countries.

Competitive

Today the Danish paint and enamel industry is undergoing a process of rationalization – equipping itself to meet competition. And it is a sign of the spirit of good will existing in the industry that when a factory has some special problem to tackle, a works conference is called. The management, technical staff, and workers leave their desks, laboratories, and benches to discuss problems freely and work together towards

A painter must sometimes act the acrobat. Above: Good paint prolongs the life of a ship. Below: Indoor paintwork is also important

an improvement in quality – and in rewards for quality work. This process of rationalization is going on not only across the borders of Scandinavia but also within the confines of Denmark. This applies to research which is carried out both by individual concerns and by a central laboratory no less than to the mechanization of production.

When Denmark's prospects in the world markets were under discussion, an independent committee was set up to consider the outlook for various branches of industry. This committee reported that large concerns capable of undertaking efficient publicity and developing new products in their own laboratories will unquestionably compete most effectively. On this showing the Danish paint and enamel industry is certainly internationally competitive.

The situation has not changed since the report was published. On the contrary, exports are steadily rising, for the quality that the buyers demand is being provided.

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Starred Centre in London

by Henrik V. Ringsted

The new Danish Centre in London's West End, combining travel offices and information services with a restaurant and food displays, has proved a great popular success and is already starred as a place to see and eat at in American and German guide books

"The Danish Centre" in the heart of London's shopping centre at the corner of Regent Street and Conduit Street is a huge success.

Almost embarrassingly so.

What was modestly meant as "a service by the Danish farmer to his British customers" has grown in a few months into one of the "musts" in London: a landmark for foreign (and Danish) visitors, already starred in American and German guides on "what to do", "what to see", and not least "where to eat", when in London.

The original idea was to have a house which could accommodate the London offices of all the Danish agricultural organizations; their information services and the National Travel Association of Denmark.

The site was found and the house built by the Danish architect Oscar E. Kjer in collaboration with the British firm of Sidney Clough, Son, and Parners. Mrs. Vibeke Reventlow was responsible for the interior decoration, and all the Danish export firms took turns—almost Disney-wise—to stock, furnish, and decorate this most modern and yet most Danish of all houses in London.

Home of Smørrebrod

Admirable as the board-rooms and offices upstairs undoubtely are, the enormous popular success of the "Danish Centre" has rather less to do with architecture and interior decoration, and a lot more with another phenomenon; perhaps more materialistic, but not wholly devoid of artistic and aesthetic merits: namely, Danish food, as chrystallized in the dizzy heights of art and invention and sheer delight in the form of smørrebrod!

I am fully aware that some of my more austere colleagues in the Danish press have been uttering grave warnings against over-publicizing Denmark as the home of smørrebrød, and I am ready to admit that there are many other achievements in many other fields (apart from the culinary), of which we Danes may justly be proud and with which we would like to impress the world around us.

But that is quite beside the point in this particular context.

For smørrebrød—quite apart from what you think of it personally or of its exploitation in tourist folders—is the most effective way of demonstrating to a foreign customer—preferably, as in our case, the English housewife—how she can put the strange and often perhaps bewildering products of our agricultural exports to practical use.

Tins and joints and coloured advertisements are all right.

But in the broad window of the "Danish Centre" there is a sorceress—we might also call her (in Danish) a *smørrebrods-jomfru*—at work from early morning till closing time, with ever-wondering crowds watching her manoeuvres, as if she were giving a non-stop demonstration of the Indian rope-trick.

They see slices of ham or salami deftly curled, stuffed with snippets of parsley, dabbed with Italian salad, and crowned with bouquets of watercress; liver paté stirred into startling action by the addition of crisp rashers of bacon, a spoonful of buttered mushrooms, slices of beetroot, and real Danish cucumber salad (prepared with Danish vinegar, for you cannot make cucumber salad with English vinegar). Before their eyes pork is made to bulge with red cabbage and prunes, and smoked eel fillets graciously lie down with fresh scrambled eggs on their well-buttered matrimonial bed of Danish rye-bread. Even a humble radish will, by the application of a deft knife, flourish into a lovers' posy to adorn a piece of golden Samsø cheese.

As soon as the sorceress in the window has finished one such towering piece of Danish delight, it wanders on to the sales desk, where customers may obtain three pieces of smørrebrød each, packed in handy little cardboard baskets, so cunningly designed that they will allow their proud owners to take the miracles home and unpack them practically intact—barring bus crashes and other unforeseeable hazards of life in London and the suburbs.

Passers-by who cannot spare the time to come inside can watch the "smørrebrød" being made from the street

A bank of deep freeeze display boxes and the cashier's cage separate this part of the "Danish Centre" from the more intimate restaurant at the back of the hall, where you can sit at tables and enjoy your smørrebrød on the spot, with coffee, milk, and soft drinks. Hundreds of Londoners have already learned to avail themselves of this little restaurant, and during the lunch hour people queue patiently throughout the length of the hall for a vacant seat.

They have to display more patience than in any other lunch restaurant in London, for it is part of the whole policy of this strange place in London that there is no hurry. Good food should be enjoyed leisurely in appropriate surroundings. You should enjoy the comfortable Danish chairs, have time to admire the tables, the tableware, the napkins, the cruets, the flower arrangements (as Danish as possible)—as well as the food.

And the waitresses are in no hurry to get you out of your seats: on the contrary, for they have been carefully selected after a series of gruelling tests. They must be able to understand and speak English (although a quaint Scandinavian accent is regarded as an asset); and they must like the English and should preferably have spent some time in an English household so that they thoroughly understand the habits and problems, the likes and dislikes, of the average British housewife. All that on top of the general standards of efficiency, expected of a waitress in a West End restaurant. Quite some qualifications!

It does not matter if these waitresses are glamorous, so long as they combine their glamour with the above qualifications; but glamorous looks—in their own rights—are definitely not the ticket to employment in the "Danish Centre". The functions of this establishment, I am told by a strict disciplinarian in charge, are fairly and squarely directed to the English housewife. And she is often inclined to be scared by glamour.

However it may be, it seems that Danish girls have a way of combining glamour with dexterity in preparing smørrebrød and soothing English housewives, so I must admit to having observed a certain number of young wolves in the "Danish Centre". They did enjoy their smørrebrød, as far as I could gather; but they were deplorably less interested in the trade balance than whether Miss X and Miss Y happened to be on duty in the kitchen or the restaurant that day.

In Old Traditional Style

In continuation of the restaurant there is a private room which can be shut off from the hall by means of folding doors, if the managers want to entertain private visitors. But normally it is open to the public as an exhibition of the Danish way of laying a table for a festive occasion. Here is the full splendour of china, silver, figurines, candlesticks, flowers, and all sorts of cornucopiae in the traditional old patrician Danish style.

Having admired everything in this "Danish Centre", whether the food, the china, the silver, or the waitresses, we all meet at the strategically placed cashier's cage.

Here is another queue to prove that Dickens was not all wrong when he wrote *Oliver Twist*. They all ask for more. And this proves to be the ingenious hub of the whole establishment.

For the cashier will ask the customer where he, or mostly she, lives; and by a flick of a hand in an enormous file will inform the customer that this and that shop in her own district stocks the goods which she has tasted and learnt to treat.

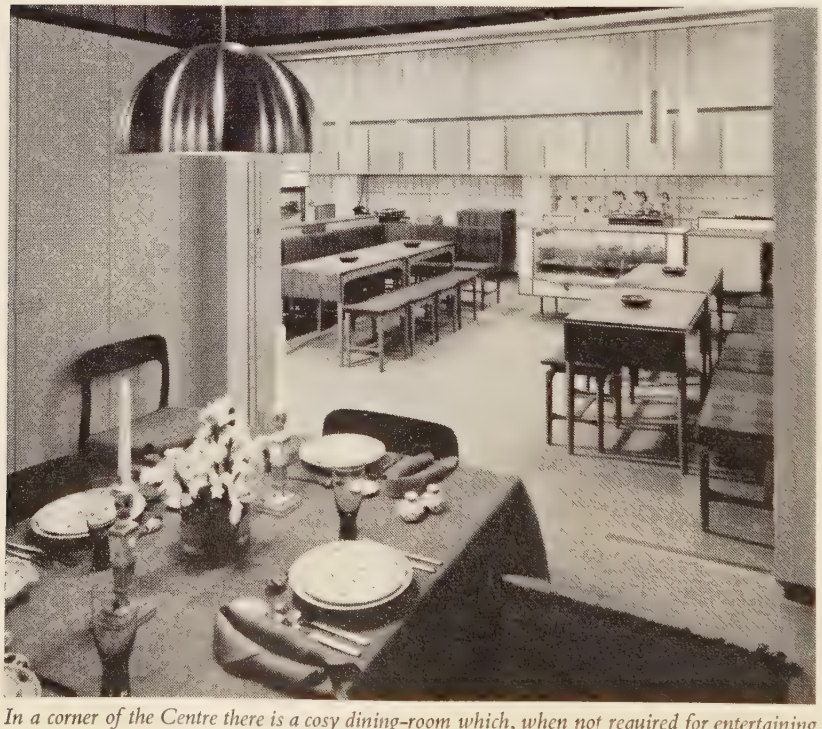
There is a good deal of idealism, seasoned with a sniff of shrewdness in this conception: people eat at the "Danish Centre", but they are only allowed three sandwiches to take out of the house. But they are told where they can get the ingredients and can go home and try to do the same.

After the lunch hour the restaurant space is used for demonstrations. Everybody is welcome—including the housewife who has just eaten a piece of smørrebrød for the first time in her life and now wants to make quite sure how it is made so that she can make it at home—but normally whole delegations of housewives' organizations from all over England fill the lecture room.

In the meantime the untiring *smørrebrødsjomfru* at the big window goes on toppling fresh shrimps artistically over and under fresh leaves of lettuce and curling sizzling bacon rashers over, under, and around fat chunks of *leverpostej* "as Mother made it". People stop, stare, enter, and leave with the now famous little cardboard baskets which tell everybody that they just happened to pass the "Danish Centre".

The success of the "Danish Centre" is indisputable after only a few months. It has already proved its value as a service to British customers and a help to the trade—and on top of that it has become a tourist attraction.

"Never mind about that", says Robert Jørgensen, who is the life and soul of this new enterprise. "What I like about the place is that it is alive all day. Many of our competitors from other countries have recently opened beautiful rooms and kitchens for demonstrations. Whenever there is a demonstration they of course have a full house, but as soon as it is over the place is empty and dead. But the 'Danish Centre' is humming with life from the moment we open until we close."



In a corner of the Centre there is a cosy dining-room which, when not required for entertaining, is used for demonstrating how a modern Danish home is furnished

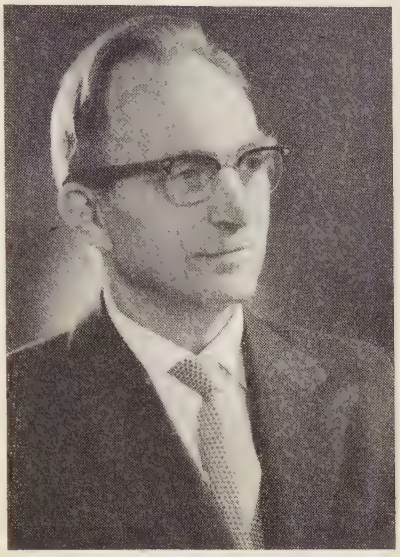
Danish Professor in Important Post

By Jens Nørgaard

To inside circles in world affairs it can hardly have come as a surprise that the Organization for Economic Cooperation and Development—the sucessor to OEEC —should have chosen Professor Thorkil Kristensen, the former Danish Minister of Finance, for the exacting post of secretary-general. As an international lecturer, a familiar figure at world conferences, and a literary contributor to the elucidation of wide-ranging international problems, Professor Kristensen has often attracted attention.

An analysis of Professor Kristensen's qualifications for his new duties would emphasize the scientist more than the politician, but would at the same time point to a practical, constructive, and untraditional political approach.

There is here something fundamental in Professor Kristensen's outlook, combined as it is with his demands for ascetic day-to-day simplicity. No Danish Minister of Finance has levied bigger taxes, and none has like Thorkil Kristensen managed to do it without losing an atom of respect. No inflammatory orator, he possesses the rare ability to expound the most involved problems so lucidly, convincingly, and simply that his audience gain a new respect for their own powers of perception! As a political adversary has rather enviously said: "Thorkil Kristensen can go out and tell people he's going



Professor Thorkild Kristensen

to take their last penny—and get them to applaud him." When as the Minister of Finance in the first post-war years he had to draft the policy for Danish economic recovery he coined the slogan "It isn't stylish to be swell" *(Det er ikke fint at være flot)*. The sentiment is so British that the phrase may well have been inspired during his two periods of study in England as an economist; whereas his other slogan, "What does it matter if the dinner's dull, so long as the wife's amusing," derives unmistakably from his home district of East Jutland.

Professor Kristensen began his self-made career there with the ordinary education of an office worker. An interest in political and social problems took him to a folk high school, and with this further education behind him he passed the university entrance examination in a year, and five years later obtained his economics degree. As a college teacher young Thorkil Kristensen created for himself a name which in 1945 took him into active politics as a Member of Parliament and the year after made him Minister of Finance, a post which he surrounded with a nimbus unknown in Denmark, without courting any popularity with the electorate.

A few months ago the neo-Liberal, or "social-Liberal", broke with his party, the Moderate Liberal Party, and was on his way out of active Danish politics into international work. Since 1956 he has made a particular study of economic power in world affairs and the growing importance of the technically underdeveloped countries to the balance between the present power groups. The conclusions of this comprehensive study are set out in the work *The World Balance*, which, together with another new work from his hand on the European market problems, seem like stepping-stones on the way to the post of secretary-general in the new OECD.

Safety at Sea and in the Air

by Knud Borch

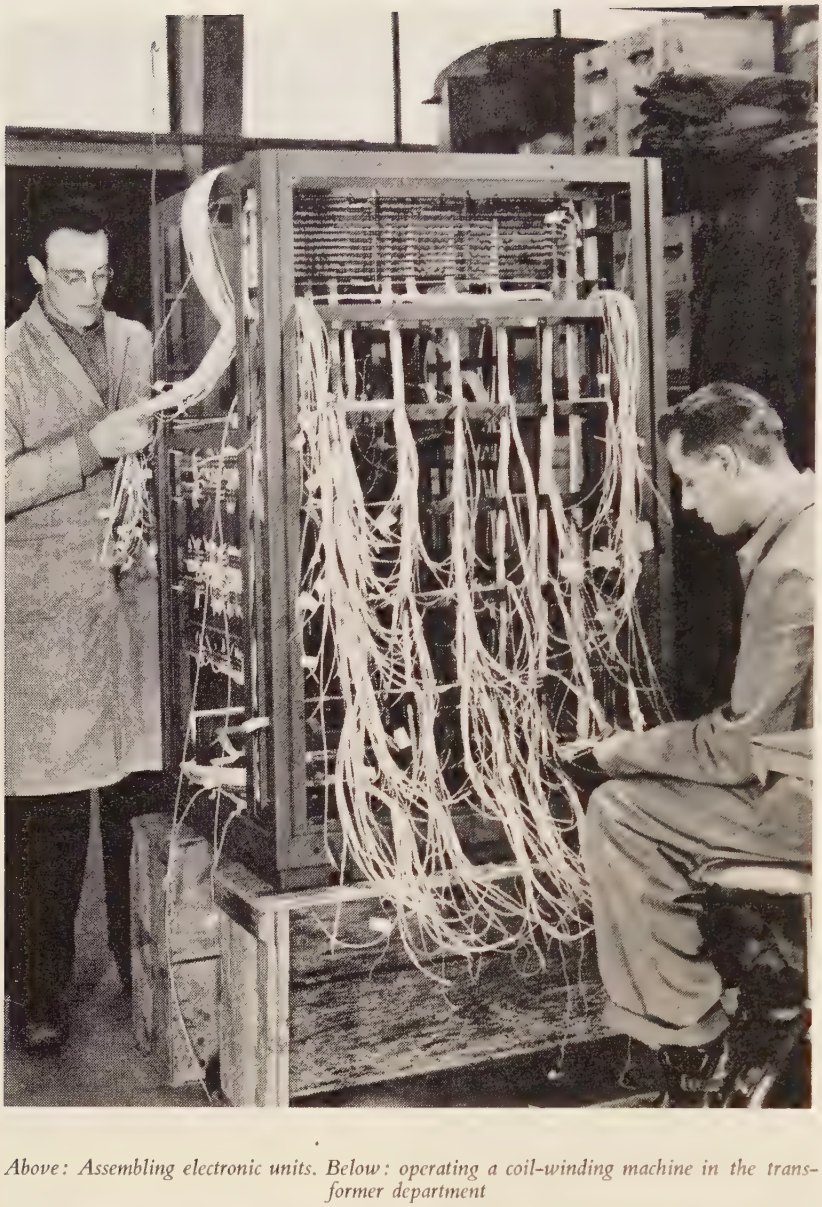
Several years of intensive research and cooperative effort lie behind the Danish radar system, which is exported to a number of European countries, to USA, South America, the Middle and Far East

Radar is one of the gifts of modern electronics to mankind. Radar means greater safety at sea and in the air, fewer risks for ships, crews, passengers and cargoes, and cheaper transport—because it enables ships to proceed in safety however bad the visibility. Radar started barely 40 years ago as part of scientific experiments intended to investigate the distance between the earth and different layers in the atmosphere. It underwent development right up to the outbreak of the war, and the first serviceable radar systems were already in use in 1939. During the war enormous efforts went into developing systems to a high degree of perfection.

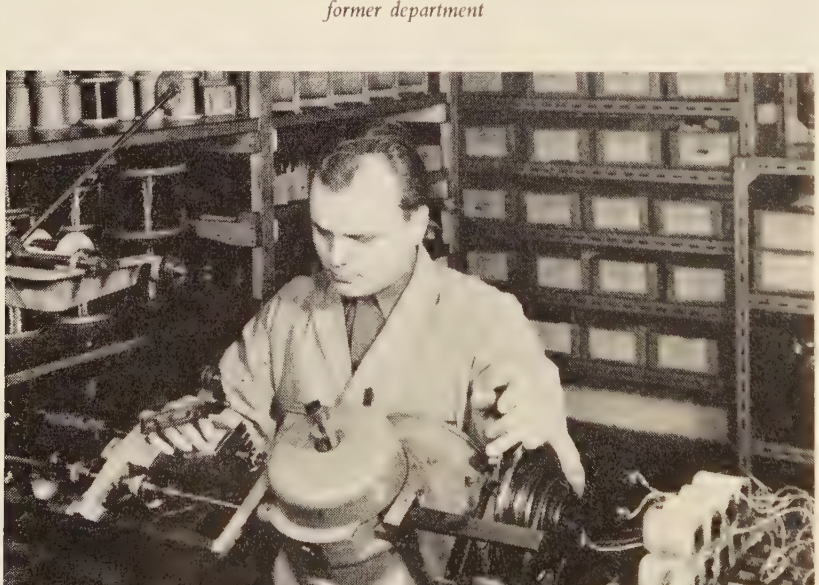
Exacting Demands

Since the war progress has continued and nowadays almost all ocean-going vessels employ radar. But only a few of the smaller ships have so far been so equipped. The reason for this has simply been that radar sets were too big, too heavy and too costly, and were unsuitable for use in narrow and island-studded waters. They gave a long-range view of an approaching ship, but the 75 or 100 yards immediately ahead of the ship's bows were dead so far as radar was concerned. This meant that the apparatus was useless for ships chiefly sailing in coastal waters, to fishing grounds, in harbours, and along rivers.

A striking example is provided by river traffic on the Rhine, which is navigated by anything up to 2,000 big river craft. Hither to these craft have been forced to tie up at night and when visibility was bad. As their normal speed is only 5-8



Above: Assembling electronic units. Below: operating a coil-winding machine in the transformer department



knots the journey up river against the current took a long time and it became important for the competitive ability of the waterways that the craft should be able to sail by day and night in all kinds of weather. A conference was therefore held by France, West Germany, Switzerland, Holland, and Belgium. At this conference experts indicated a number of exacting demands which navigational aids would have to fulfil if river craft were to be enabled to sail in safety in darkness and fog. At that time there was no radar apparatus which could meet these demands. The situation called for a revolution in radar thinking.

These demands will before long doubtless be the model for all navigation throughout the network of rivers and canals which is to form a central European traffic system, and similar demands will have to be met on other waterways which are being increasingly utilized all over the world.

Danish Radar System

One of the first companies to produce a radar system which fulfilled these demands was the sole Danish manufacturer—in fact the sole Scandinavian manufacturer—of radar apparatus. This company's Pilot radar was able to pick up obstacles which lay only 11 yards ahead. This meant not only that the exacting Rhine conditions were fulfilled, but also that a radar system had suddenly appeared which could be used with advantage by fishing vessels in busy waters, by tugs and pilot vessels, and by coastal vessels which frequently have to feel their way forward between skerries and shallows marked by buoys and brooms.

The Danish factory is comparatively new. It is only nine years since it first began to manufacture radar and it has just celebrated its tenth birthday. Only in recent years has there been sizable production, coupled with the growth of a world-wide service organization so that the Danish radar system can be repaired wherever it may be.

The Pilot radar is of fairly light though exceedingly robust construction. The aim has been to produce an apparatus which would be neither too heavy nor too large. It can be installed in the smallest craft, and tests have shown that it can operate under the most difficult conditions for years without attention. One apparatus, for example, has been working for seven years on a Danish sea rescue vessel in the North Sea. The Pilot radar has also been designed so that it can be used by untrained navigators. To operate

The Danish radar, which is sensitive even at close range, is suitable for tugboats

it needs neither long training nor long experience. The manufacturers made an interesting experiment to test clarity of its picture. They took a photograph of the picture on the radar screen during the entry into the port of Copenhagen. Then they showed the photograph to a number of foreign ships' captains and asked them if they could immediately identify what the radar picture showed. None of them had the least doubt that the picture showed the entry into the harbour of the Danish capital.

When the factory started production there were no trained electronic workers. There were specialists—electronic engineers trained abroad—but the workers had to be taught right from the beginning. The craftsmen selected for training were electricians, light mechanics, goldsmiths and so on, and they were retained to perform special tasks. Nowadays the factory has a large number of technicians and workers continually under training, and quite young people are being taken on for four years' training.

New Sales Offices

During the last three years this Danish radar factory has doubled its turnover and this year will redouble it. Exports are now made to all western European countries and new sales offices are being set up round the world. The Danish radar has entered most markets—the USA, South America, the Near and Far East.

The demand for a short-range radar has proved to be great—greater than expected, because large ships which already have long-range radar need a short-range system which can be used for manoeuvring in port. It is here above all, where many craft come together and space is scarce, that navigators and pilots have need of an auxiliary precision instrument which can quickly show them if the way is clear and if they are working their way satisfactorily towards the quayside.

Small Apparatus

The apparatus is still being developed. In recent years emphasis has been laid on the provision of a strong signal which will allow the picture to be tuned down so that false echoes created by the crests of waves, snow, and showers can be eliminated while the signals which show solid objects on the sea remain clearly and sharply defined.

The Danish company now has three types of radar in production—the short-range precision instrument, a medium-distance radar suitable for all ships, and a really long-range apparatus. The idea is that ferries and other passenger ships shall have a double check by being provided with both the long-range and the short-range system, while the two smallest and cheapest sets, which in the matter of price are competitive all over the world, are intended for smaller ships.

The Danish radar system stood up to its severest test in the Greenland ice. The route to Greenland is one of the most dangerous in the world. But now the Greenland Trading Board's ships are fitted with the Danish radar sets and they have proved not only extremely valuable but robust enough for the severest conditions. They have also been extremely useful in navigating the ice, for they quickly locate gaps in the ice floe which a vessel can make use of. The Greenland Trading Board's ships have frequently been able to slip through the ice without trouble, thanks to the Danish radar, while other ships with normal radar sets have had to wait in bad visibility for days at the edge of the floe.

In the Danish Sea Rescue Service the apparatus has proved its worth when installed in the convoy ships which, when visibility is bad, lead fishing craft in convoy out into the open sea.

The Danish manufacturers are now using printed circuits and are experimenting with transistors in order to make the sets still lighter and more compact. Even now they take up so little room that they can be installed in the smallest of vessels.

This Danish company has also been able to assist Danish industry in what is nowadays known as industrial electronics with electronic aids. This is another sphere in which the company foresees a big future: nowadays there is a need of electronic specialists all over the world.

Electrons are in demand—and the well-trained Danish workers are the men to control them.

Chairs for All Time

by JØRGEN RANTEN

It is characteristic of the best Danish craftsmanship and applied art that its style and appeal are timeless

The present-day production of Danish craftsmen, applied artists and furniture designers cannot be generally classified, in the way that we classify the styles of former periods, as Renaissance, Baroque, Rococo, and so on. The most we can say is that the products are Danish, conceived and designed in present-day Denmark.

During the last thirty years, Danish artists, craftsmen, and furniture manufacturers have blazed their own trails, aesthetically and practically.

Evidence that the Danish furniture "idiom" is internationally understood is the fact that Danish furniture stands high in international esteem. It is confirmed by the steadily increasing sales, and by the many imitations which have necessitated legal proceedings for infringement of Danish designs.

Machines to the Aid

Not long ago, a group of journalists on a visit to Denmark were shown round a large furniture business which has been internationally successful. The tour began at the "wrong end": with the finished furniture. "Splendid art", a connoisseur among them said. "Denmark must be fortunate to have such excellent designers".

They then proceeded to a large room, where craftsmen of various ages were giving the furniture a last thorough inspection and adding the finishing touches.

"There", said another connoisseur, "you see. It's the craftsmen that count. With us there are hardly any left. Everything is factory made, mass-produced".

"Well", said the chief cabinet-maker, "we too use industrial methods; otherwise we should be unable to compete.

"Without a good bit of preliminary work of a factory nature we should be selling our furniture to an exclusive group of very wealthy buyers".

The door of another department was opened. Here machine-operators were producing the parts. These can be made much more cheaply and more accurately on a mass-production scale than by the old hand methods.

With a good piece of Danish furniture it is difficult to tell where the factory work ended and the craftsman took over. But the success of the designers can be judged by two criteria: a piece of furniture must be practical in use, and must fulfil certain aesthetic requirements.

Another point that has interested international connoisseurs and furniture dealers is that Danish designers and makers pay great attention to the size of their customers' homes and pockets. It may seem pretentious to say so, but in Denmark today furniture is being made to suit everybody, in size and price. But the demands on quality of material and accuracy of production are never relaxed.

One of the pioneers of Danish furniture-designing said, a few years ago, that they were endeavouring to produce furniture purified in form and free from exaggeration, so that it would best survive changing fashions and tastes and preserve its artistic and functional values as long as possible.

That, certainly, is true. Danish furniture has no "style". It cannot be classified. But the materials from which it is made are utilized to the utmost by the designer. The craftsman, applying his knowledge and skill, imparts quality to it. The industrial worker, performing his share of the work to the strict standards of designer and craftsman, helps to keep the price within reach of all.

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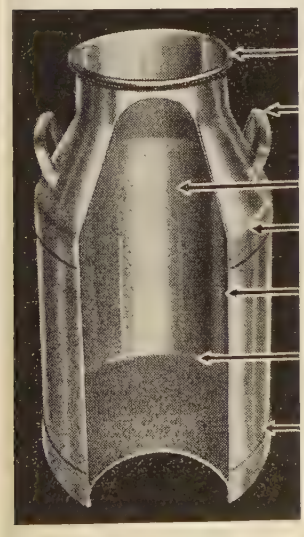

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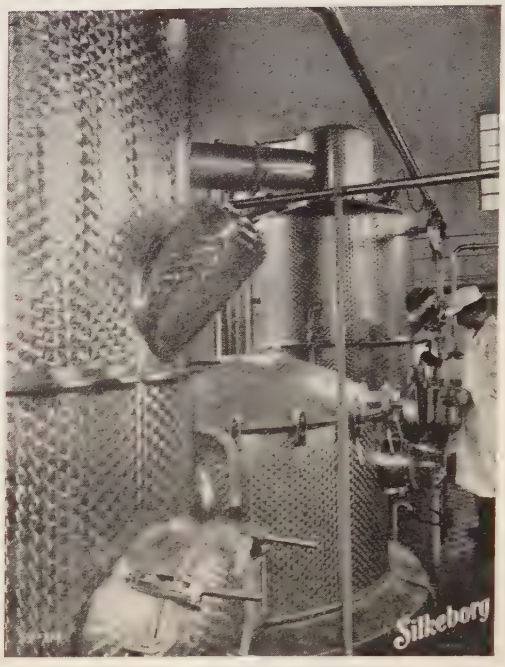

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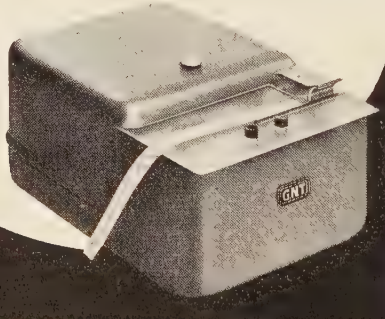

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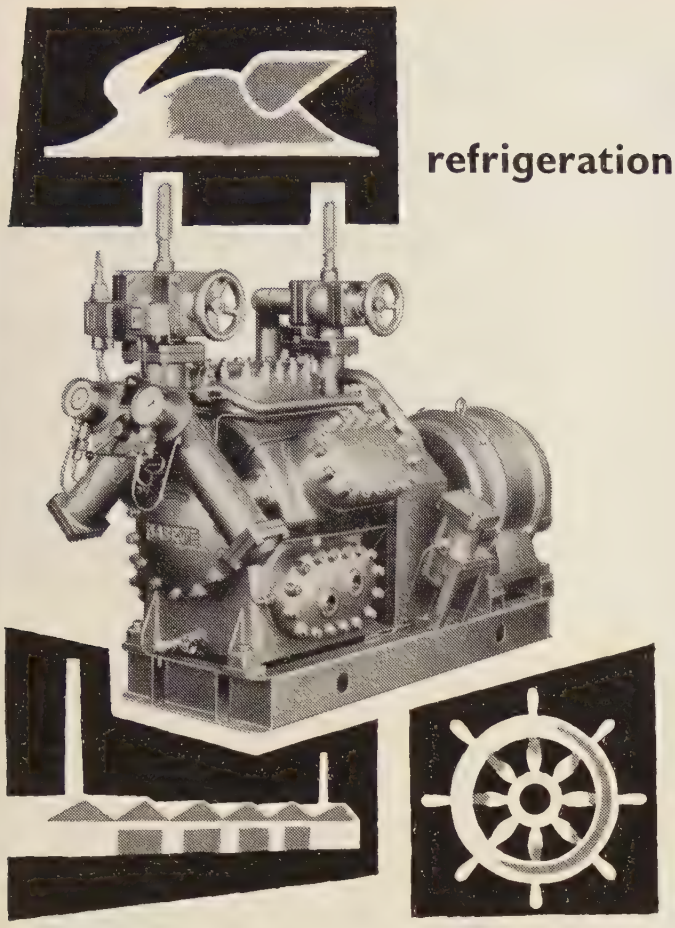

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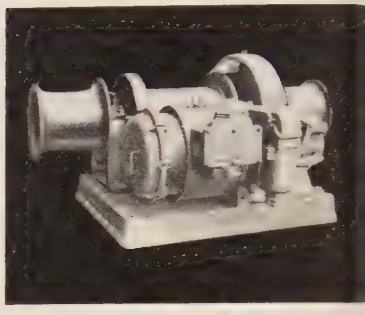

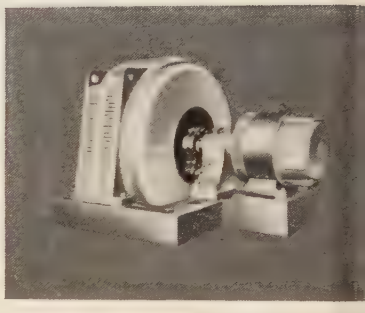

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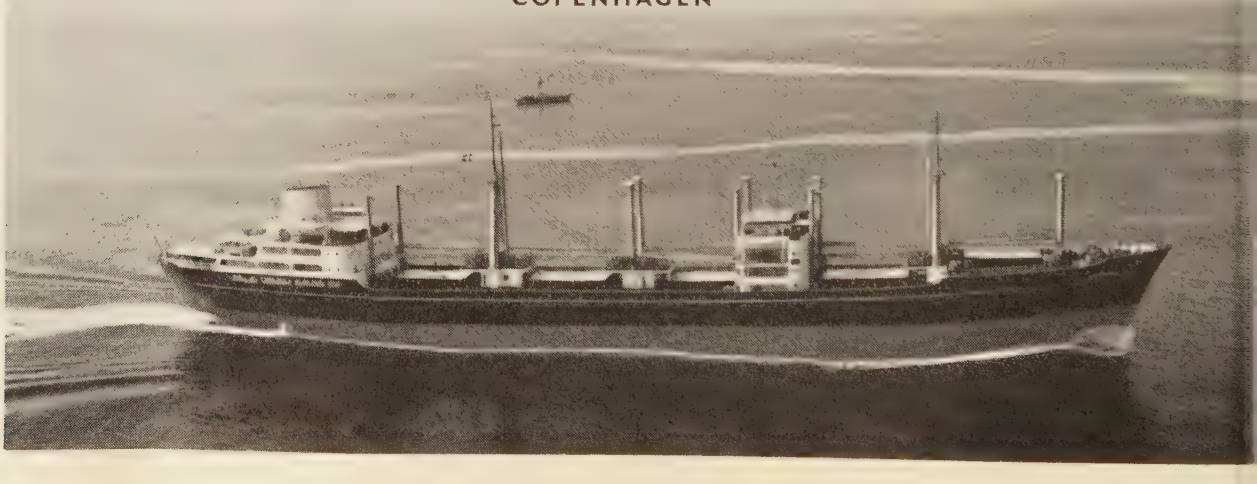
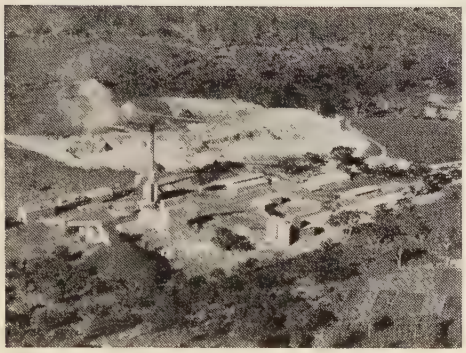
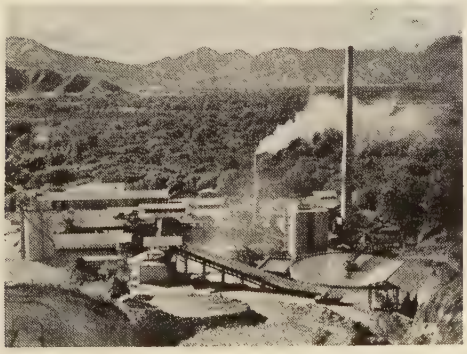


WORLD-WIDE ACTIVITIES

Cement Works in Norway



Cement Works in Australia



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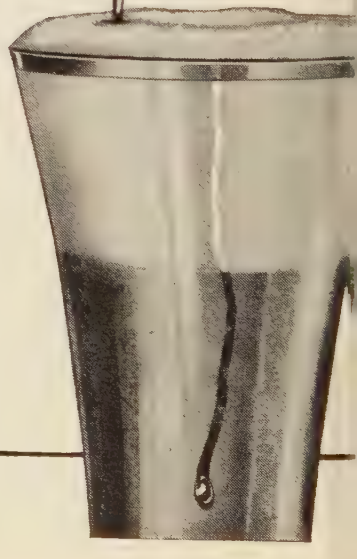

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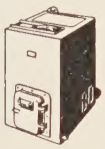

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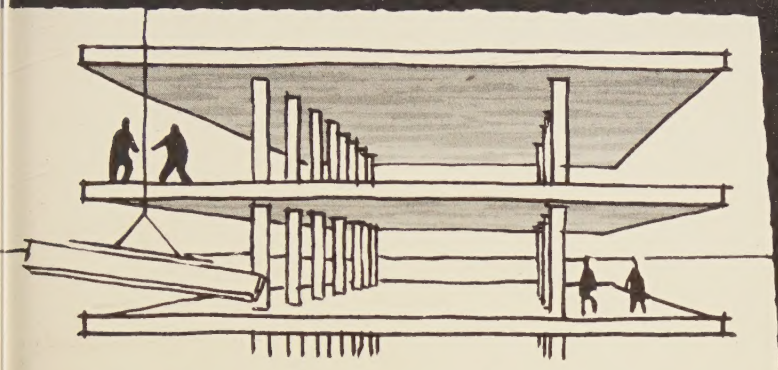

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